

CITY OF SAN JOSE
DEPARTMENT OF PUBLIC WORKS

STANDARD DETAILS

JULY 1992



STANDARD DETAILS

CITY OF SAN JOSE DEPARTMENT OF PUBLIC WORKS

JULY 1992

**Honorable Susan Hammer
Mayor**

**Leslie R. White
City Manager**

**Ralph A. Qualls, Jr., P.E.
Director of Public Works**



Copies of this book may be purchased from:

*City of San Jose
Department of Public Works
801 N. First St.
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CITY OF SAN JOSE
Department of Public Works

STANDARD DETAILS

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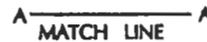
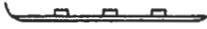
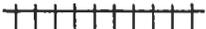
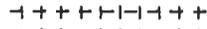
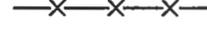
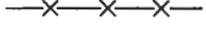
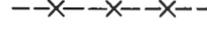
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GENERAL

LEGEND

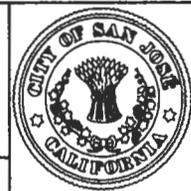
TO BE CONST.	EXISTING	REMOVE, SALVAGE OR RELOCATE	DESCRIPTION
			PROPERTY LINE
			CENTER LINE
			LIMIT OF WORK LINE
			MATCH LINE
	<i>CITY OF SAN JOSE</i> <i>COUNTY OF SANTA CLARA</i>		CITY LIMIT LINE
			EDGE OF PAVEMENT
			CURB AND GUTTER
			SIDEWALK
			DRIVEWAY
			PAVING CONFORM
			CITY SURVEY MONUMENT
			FIRE HYDRANT
			STREET SIGN (W/ABBR. SYMBOL)
			GUARD RAIL
			STANDARD CITY BARRICADE
			RAILROAD TRACKS
			FENCE (TYPE)
			DUPLICATE ITEM (INDICATE W/SYMBOL)
			KEY TO CHANGES
			WHEELCHAIR RAMP

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JDM

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LEGEND

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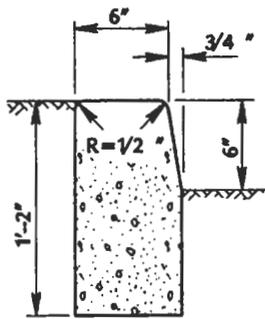


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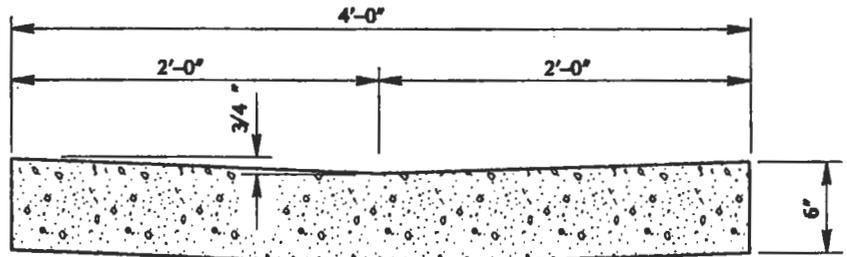
TO BE CONST.	EXISTING	REMOVE, SALVAGE OR RELOCATE	DESCRIPTION
———	———		SANITARY SEWER
- - - -	- - - -		STORM SEWER
●	○	○	SANITARY MANHOLE
◎	◎	◎	STORM MANHOLE
● FI	○ FI	○ FI	FLUSHING INLET
▲	△	△	STANDARD HOODED INLET
▲	△	△	LARGE HOODED INLET
▲▲ GDO	△△ GDO	△△ GDO	ALTERNATE DRAINAGE INLETS (TYPE AS NOTED)
■	≡	≡	REGULAR FLAT GRATE INLET
■	≡	≡	LARGE TYPE FLAT GRATE INLET
——— G ———	——— G ———		GAS LINE
——— W ———	——— W ———		WATER LINE
——— T ———	——— T ———		TELEPHONE FACILITIES
——— TV ———	——— TV ———		CABLE TELEVISION
——— JT ———	——— JT ———		JOINT TRENCH
□ G	□ G	□ G	GAS METER
□ W	□ W	□ W	WATER METER
— G — — G —	— G — — G —		GAS VALVE
— W — — W —	— W — — W —		WATER VALVE

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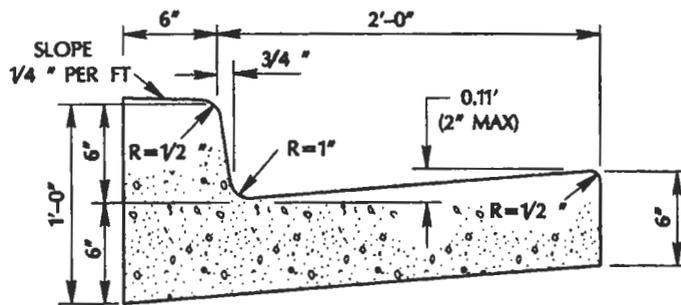
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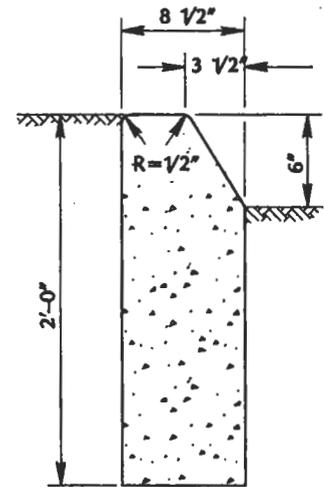
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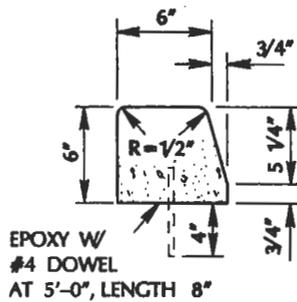
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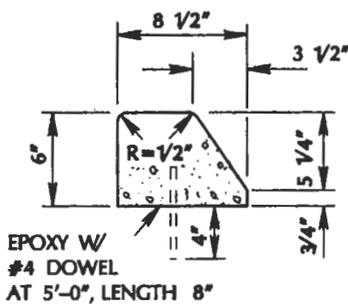
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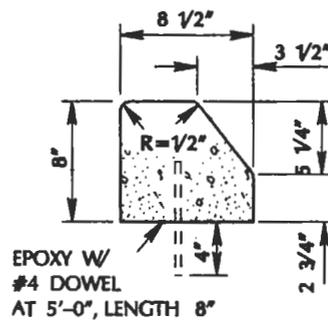
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A1-B3



B3-6



B3-8

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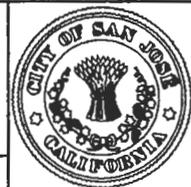
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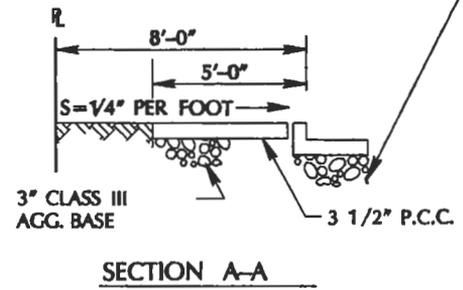
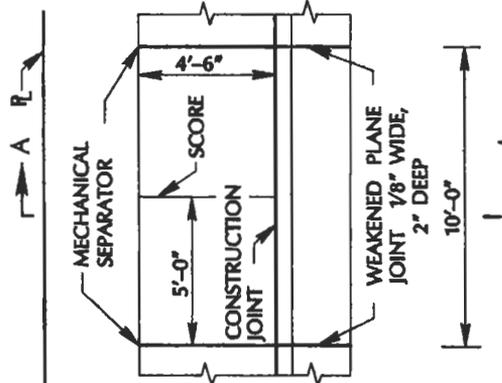
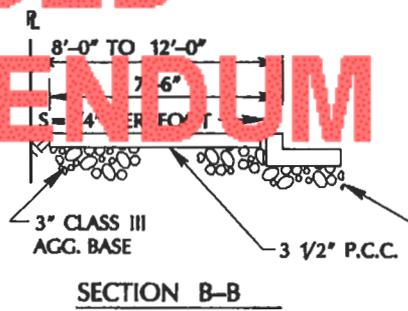
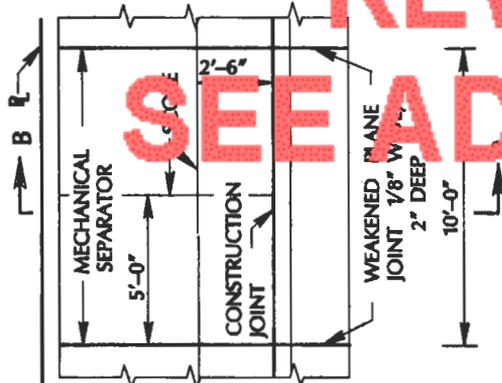
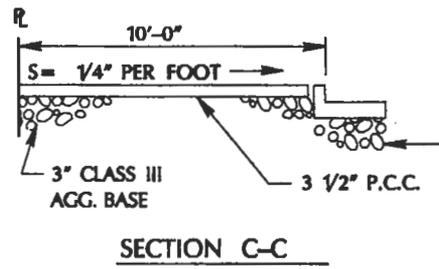
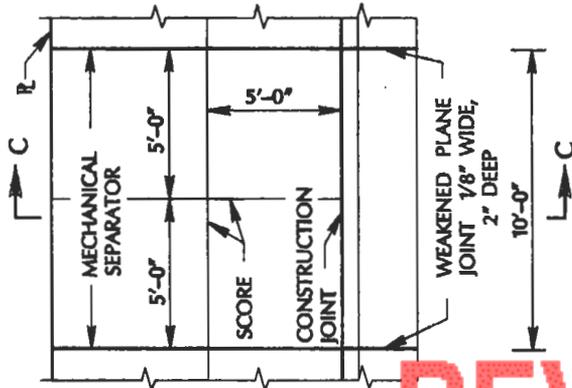
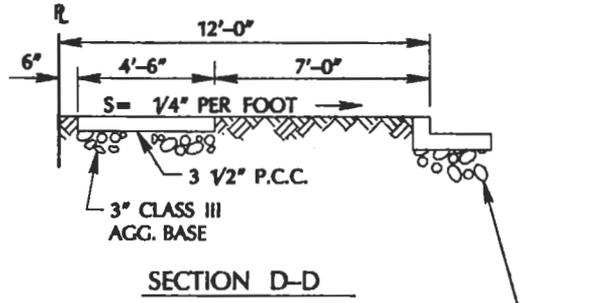
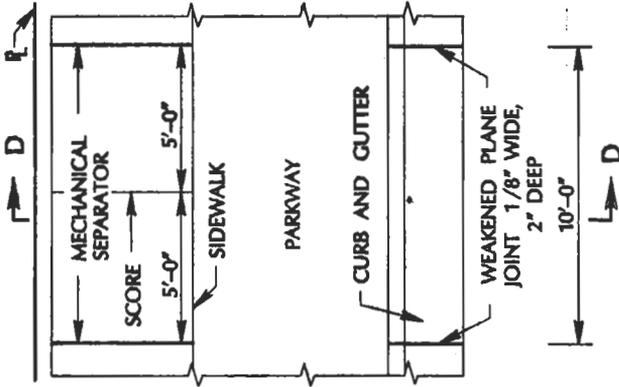
CONCRETE CURB AND/OR
GUTTER TYPES

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R-1



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6" CLASS III AGGREGATE BASE (OR AS SPECIFIED IN PLANS)

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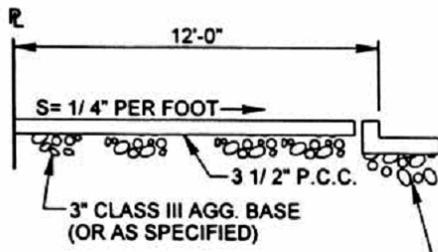
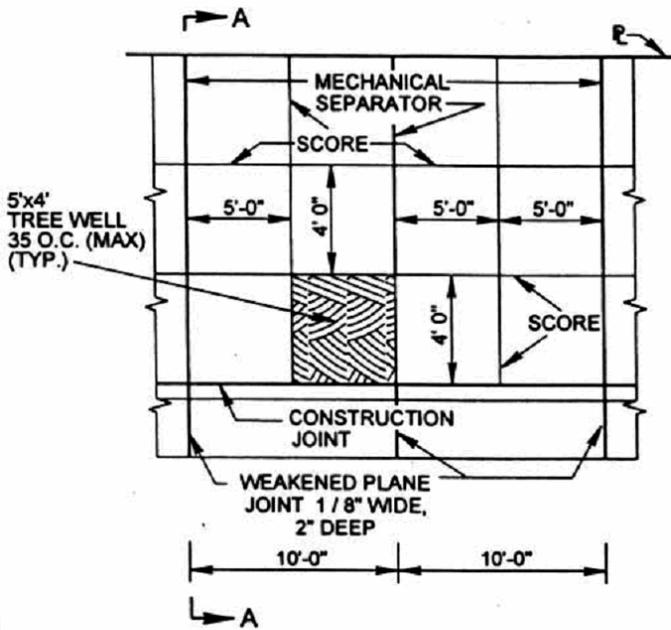
CURB, GUTTER & SIDEWALK CONFIGURATIONS

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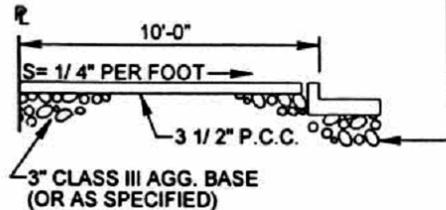
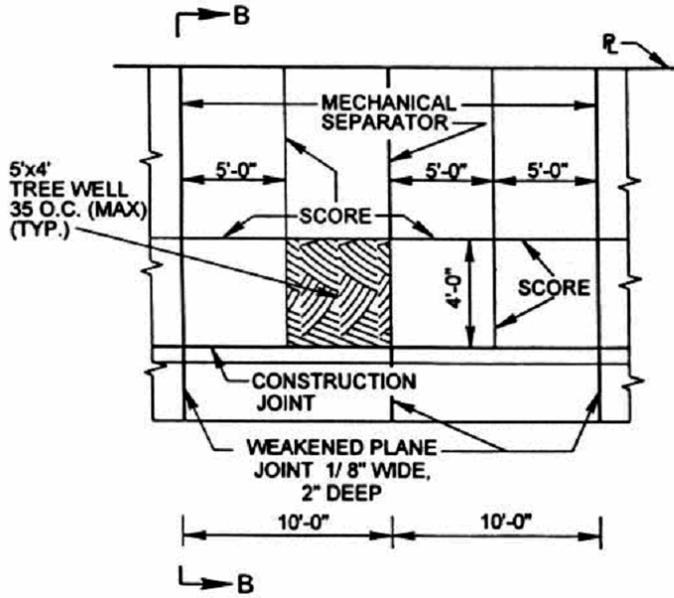
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SECTION A-A
ARTERIAL / COLLECTOR
 (COMMERCIAL / INDUSTRIAL)

6" CLASS III AGGREGATE BASE (OR AS SPECIFIED IN PLANS)

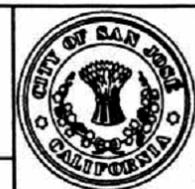


SECTION B-B
COLLECTOR
 (COMMERCIAL / INDUSTRIAL)

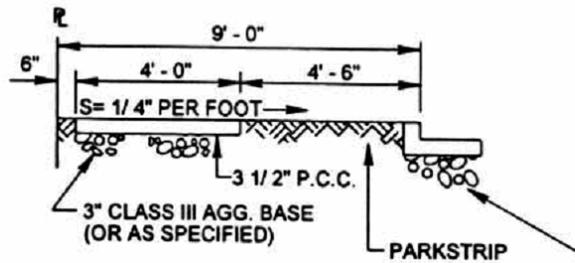
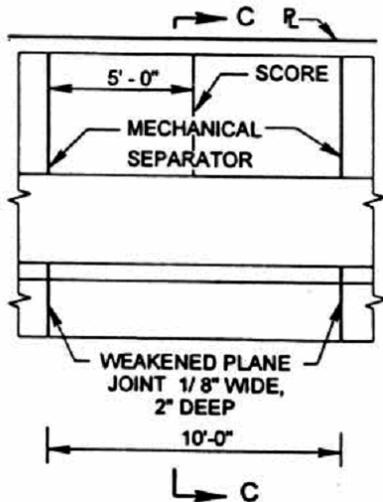
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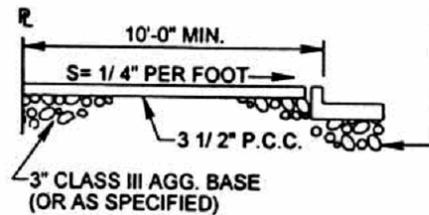
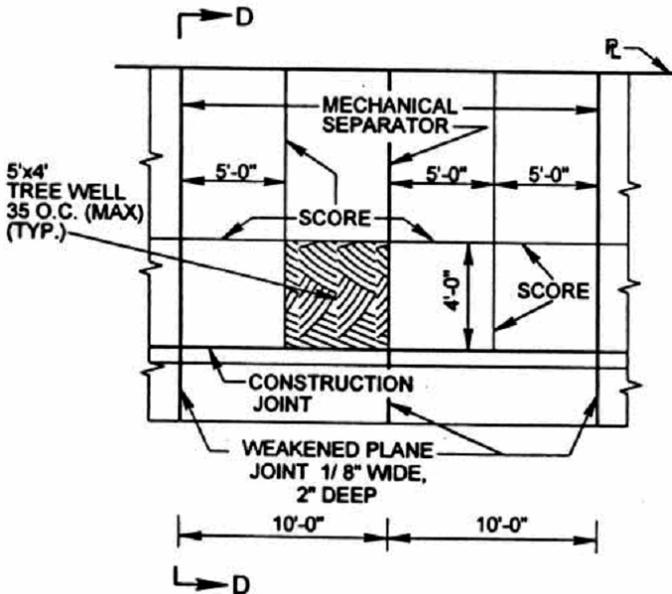
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SECTION C-C
RESIDENTIAL STREET



SECTION D-D
HIGH DENSITY
RESIDENTIAL
(RETROFIT)

6" CLASS III AGGREGATE BASE
(OR AS SPECIFIED IN PLANS)

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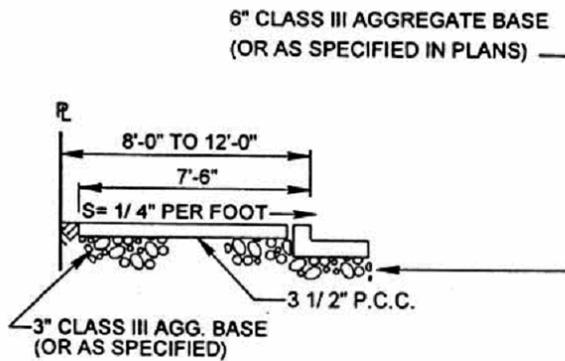
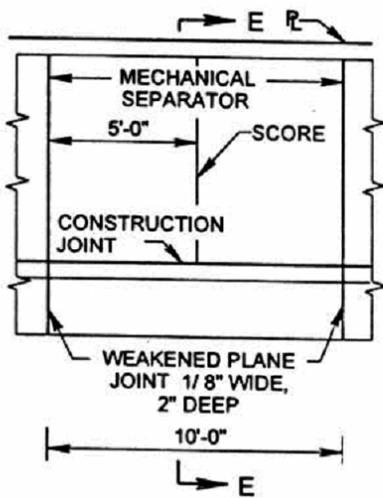
CURB, GUTTER & SIDEWALK
CONFIGURATIONS

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SECTION E-E

INDUSTRIAL
(RETROFIT)

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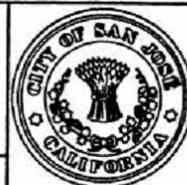
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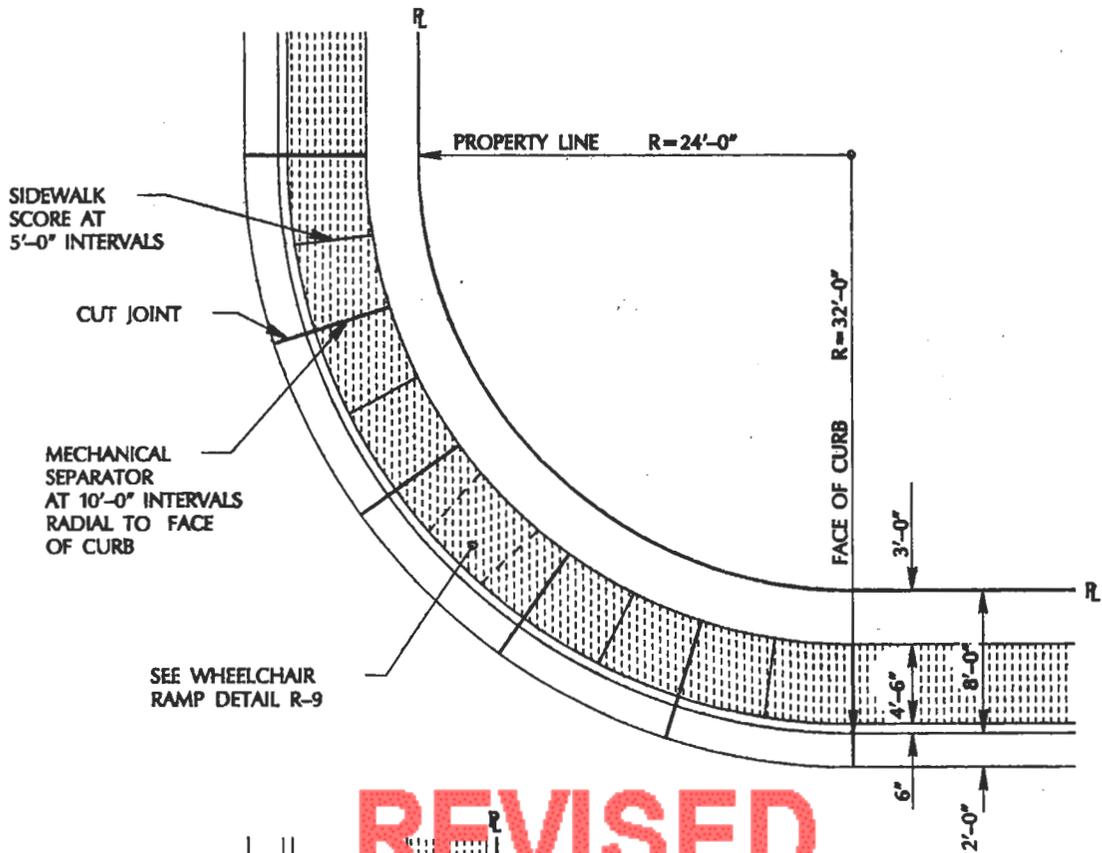
CURB, GUTTER & SIDEWALK
CONFIGURATIONS

DEPARTMENT OF PUBLIC WORKS

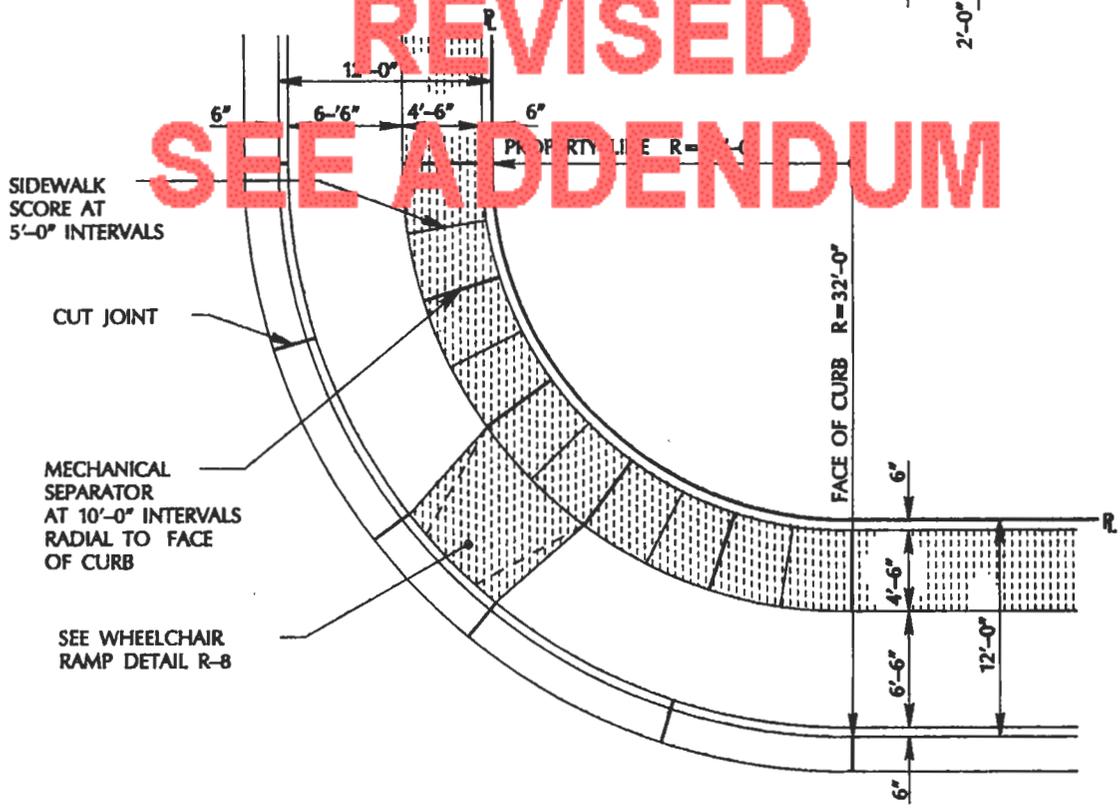


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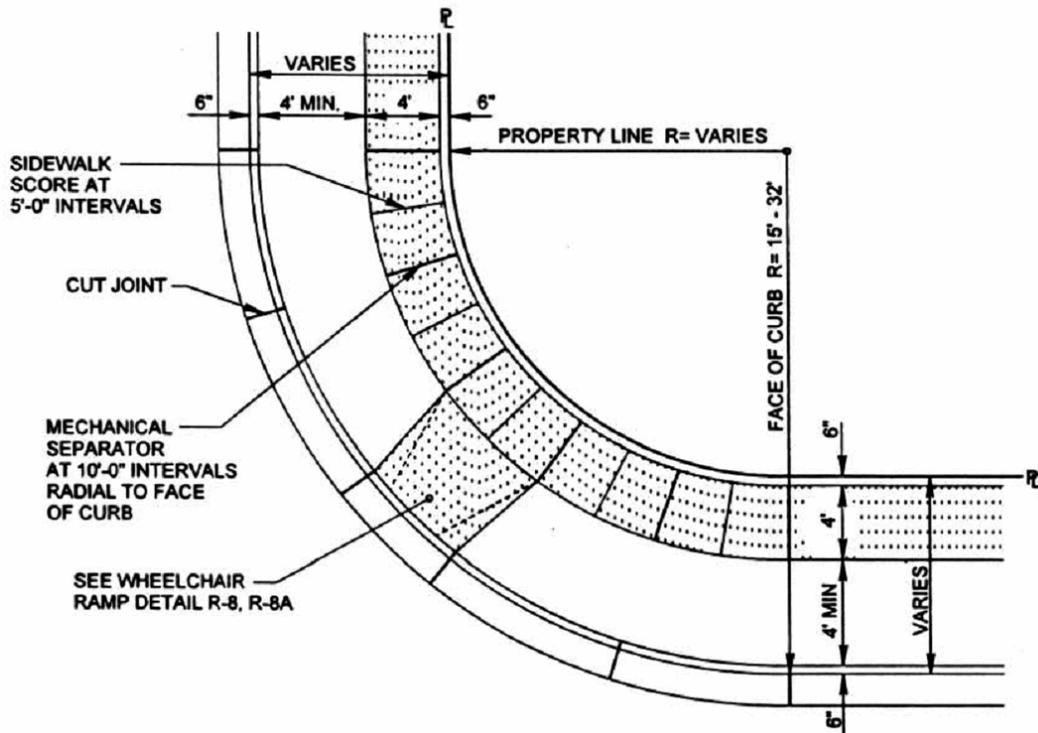
**STANDARD RESIDENTIAL RETURN
ATTACHED AND
DETACHED SIDEWALKS**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

R-3



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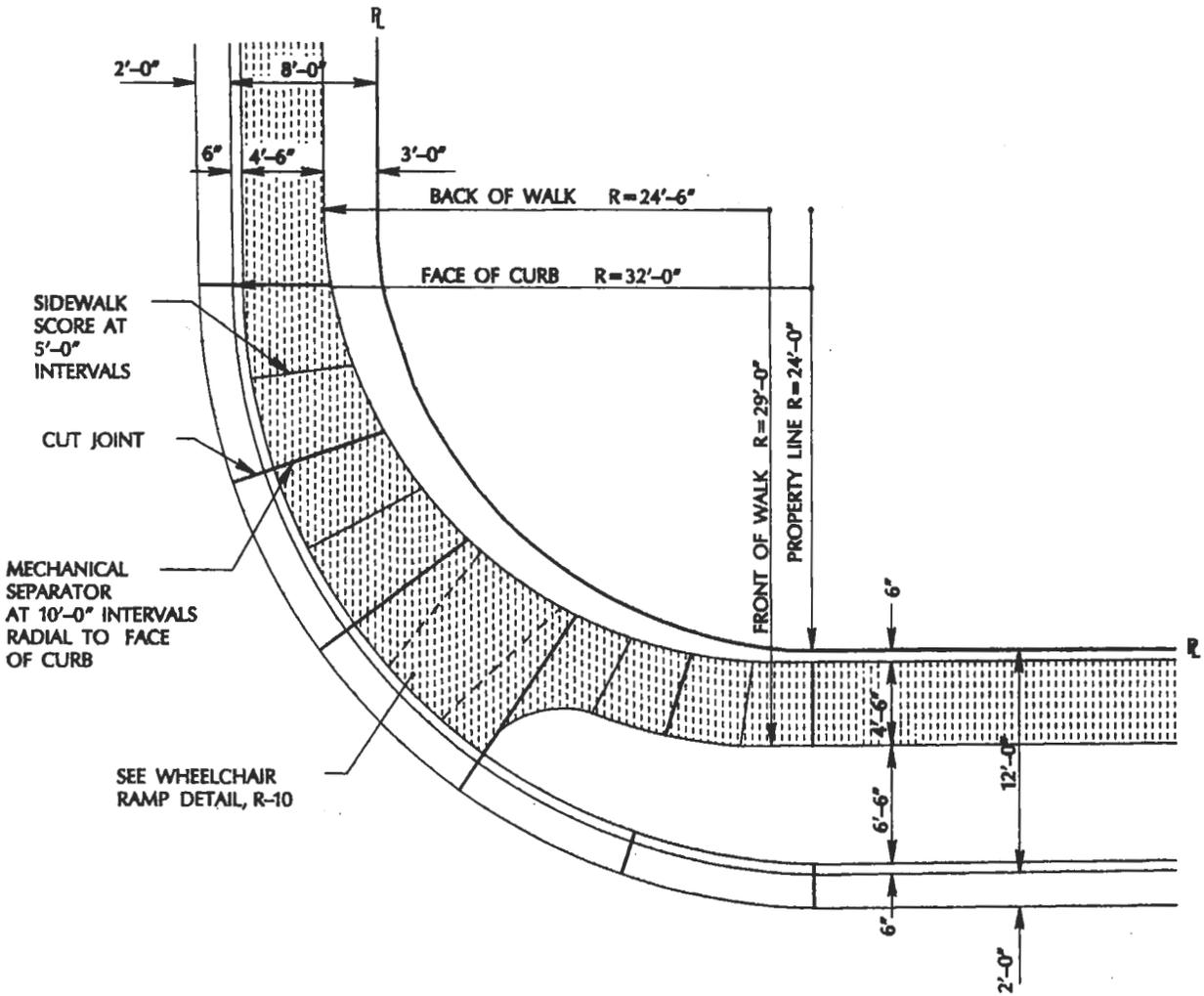
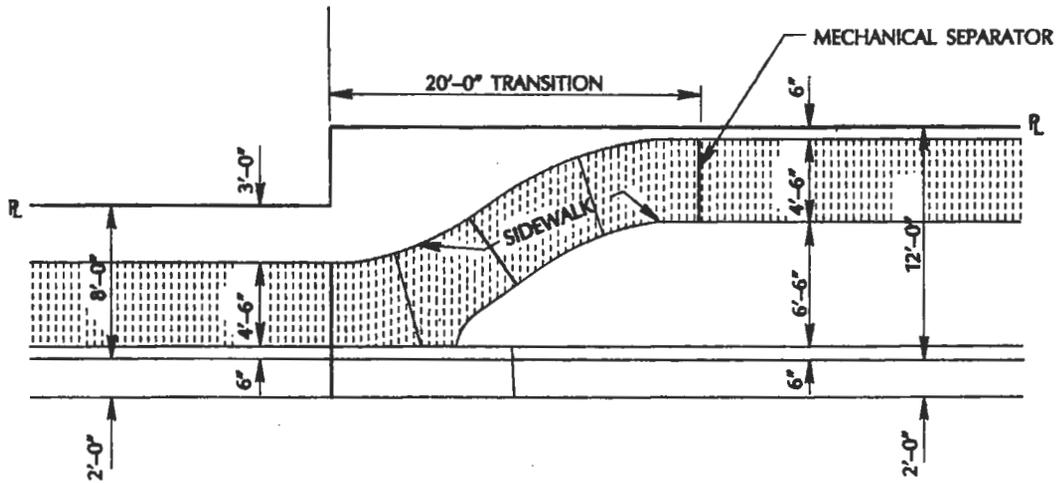
STANDARD RESIDENTIAL RETURN
AND DETACHED SIDEWALKS

DEPARTMENT OF PUBLIC WORKS



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R-3



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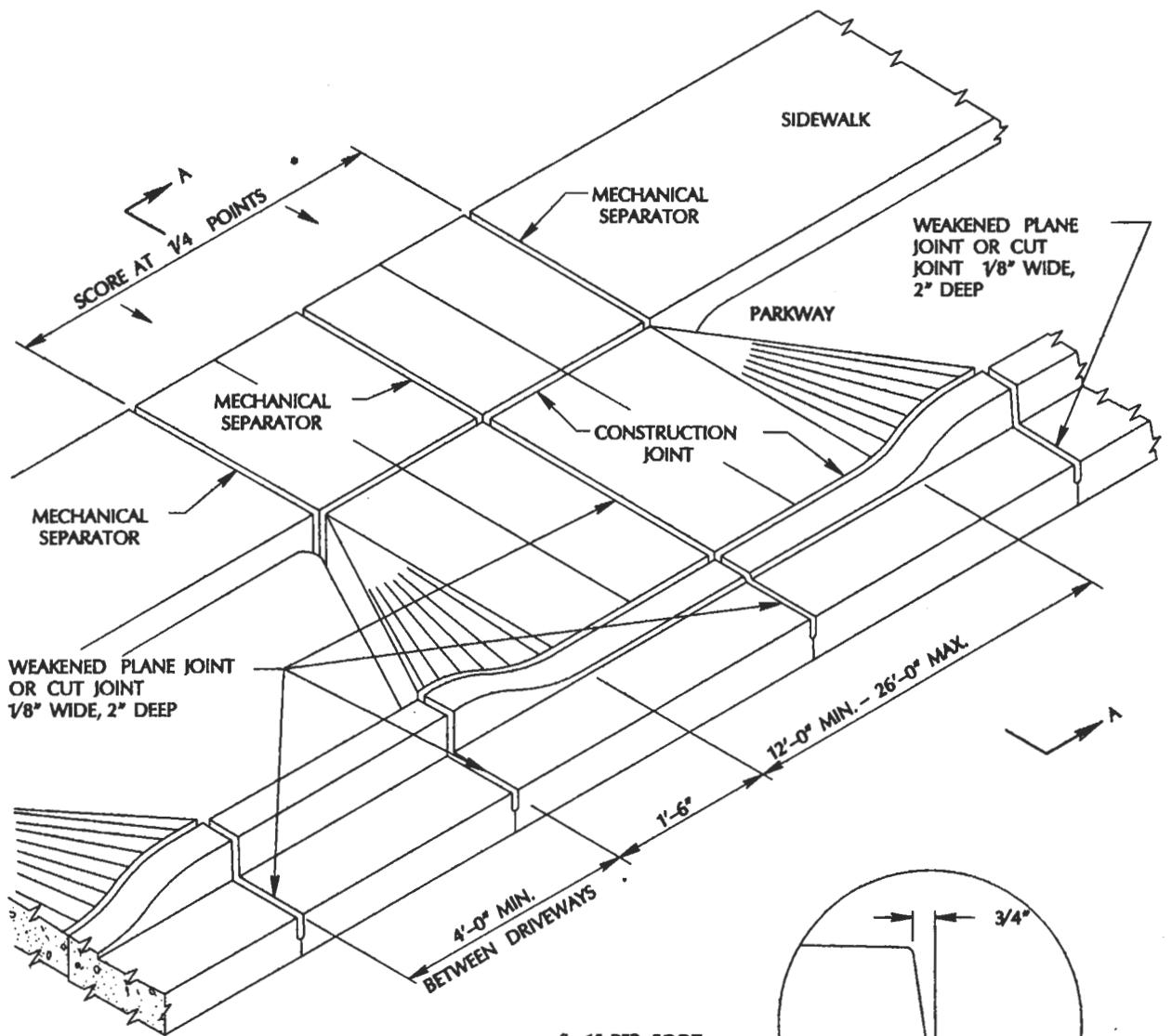
SIDEWALK TRANSITIONS
4'-6" ATTACHED SIDEWALK TO
4'-6" DETACHED SIDEWALK

DEPARTMENT OF PUBLIC WORKS



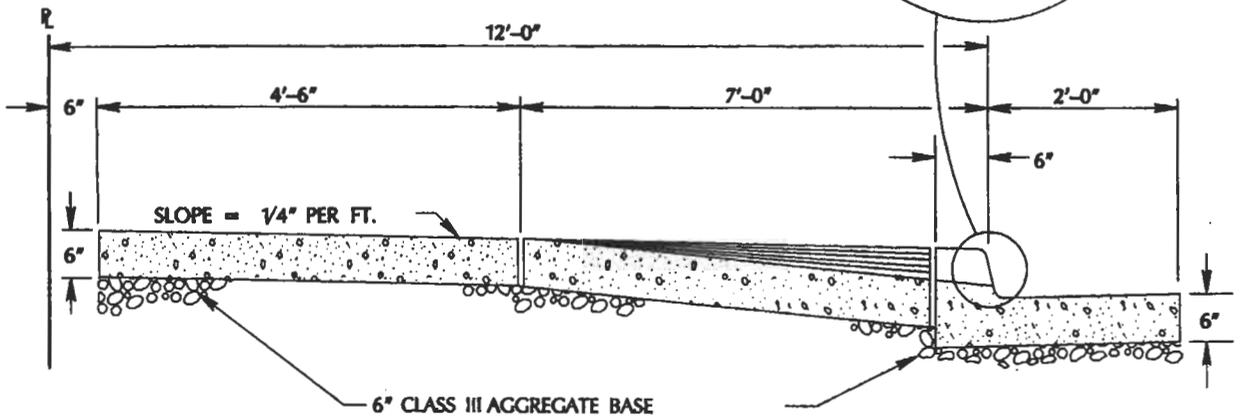
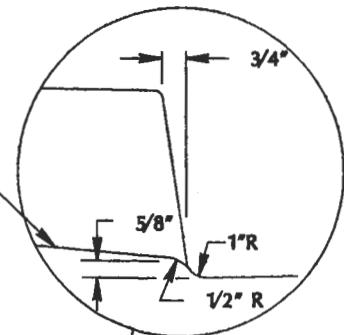
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R-4



• **NOTE:** SCORE MARKS NOT TO EXCEED 4'-0" O.C., USE MECHANICAL SEPARATOR AT EVERY OTHER SCORE MARK.

S=1" PER FOOT



SECTION A-A

APPROVED BY
J D M

DATE

4/10/92

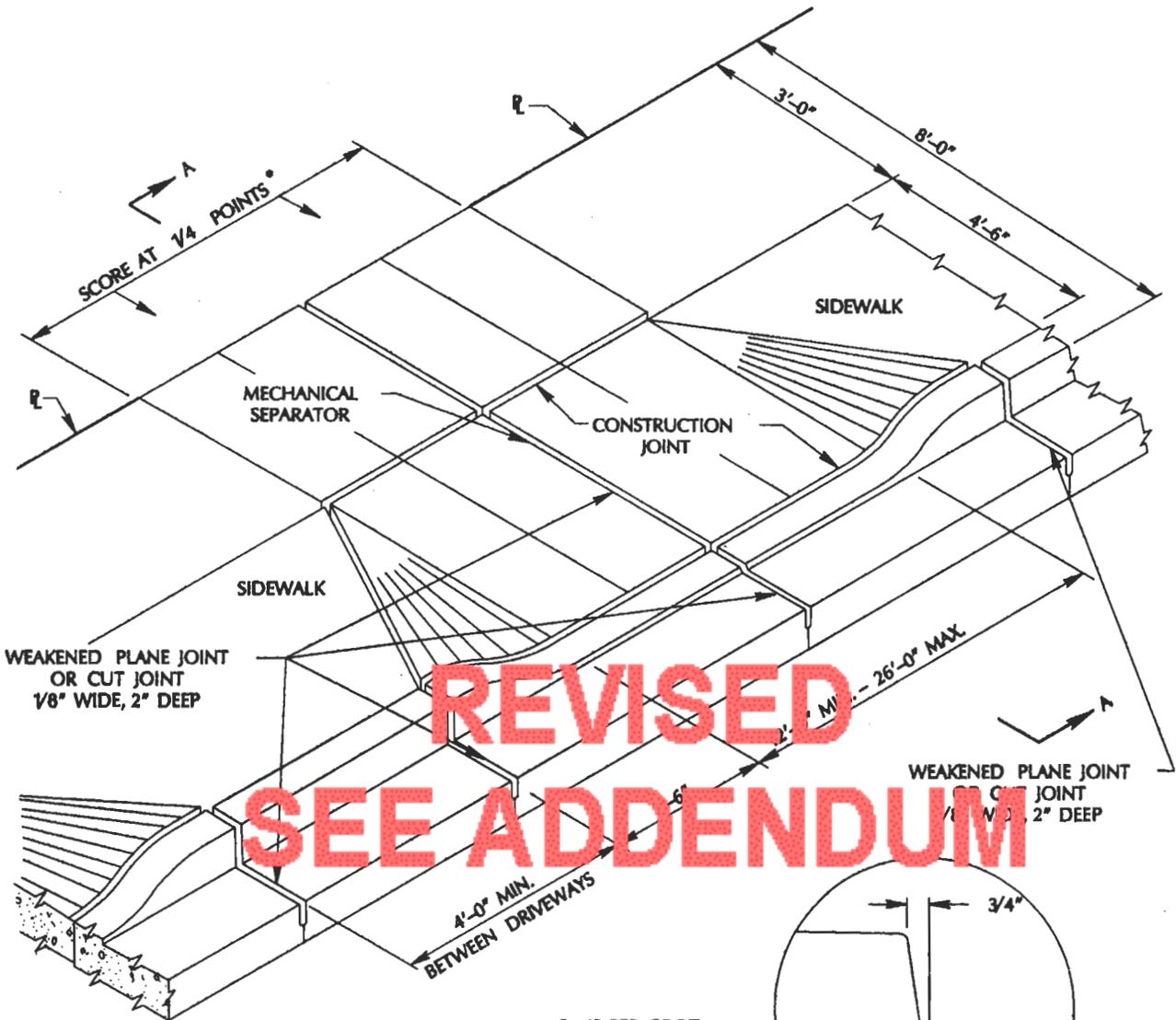
**RESIDENTIAL DRIVEWAY
DETACHED SIDEWALK**

DEPARTMENT OF PUBLIC WORKS



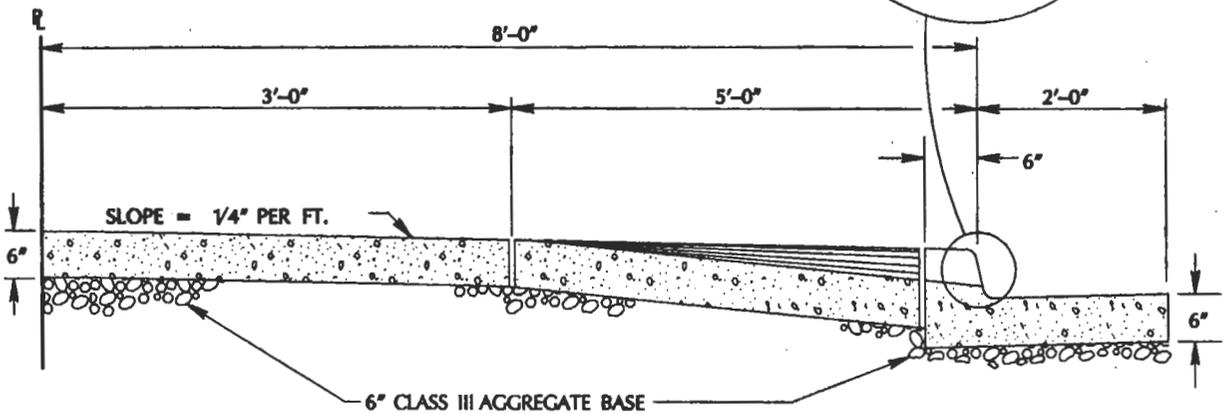
DRAWING NO.

R-5



REVISED
SEE ADDENDUM

* NOTE: SCORE MARKS NOT TO EXCEED 4'-0" O.C., USE MECHANICAL SEPARATOR AT EVERY OTHER SCORE MARK.



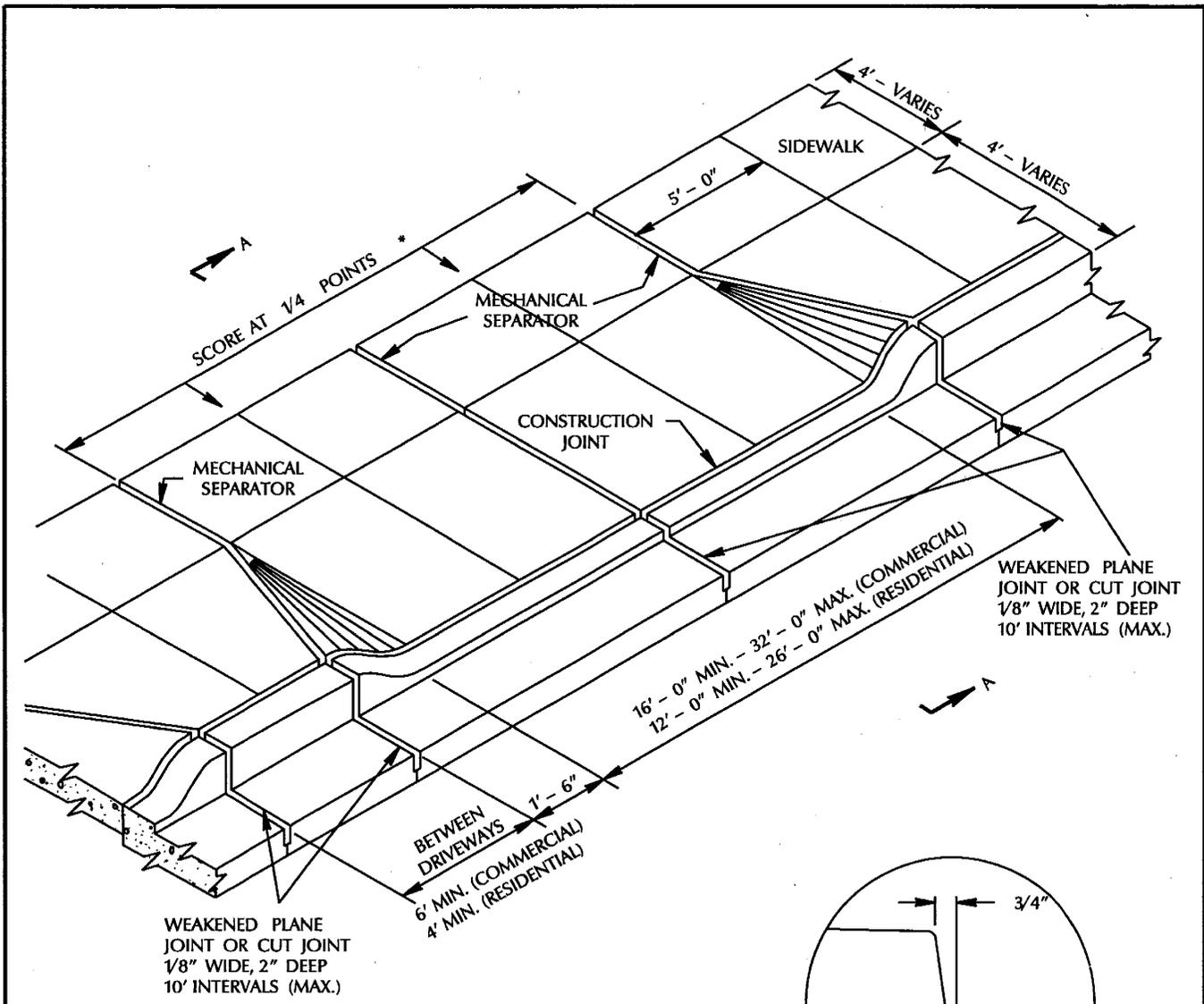
SECTION A-A

APPROVED BY
JDM
DATE
4/10/92

**RESIDENTIAL DRIVEWAY
ATTACHED SIDEWALK**
DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
R-6



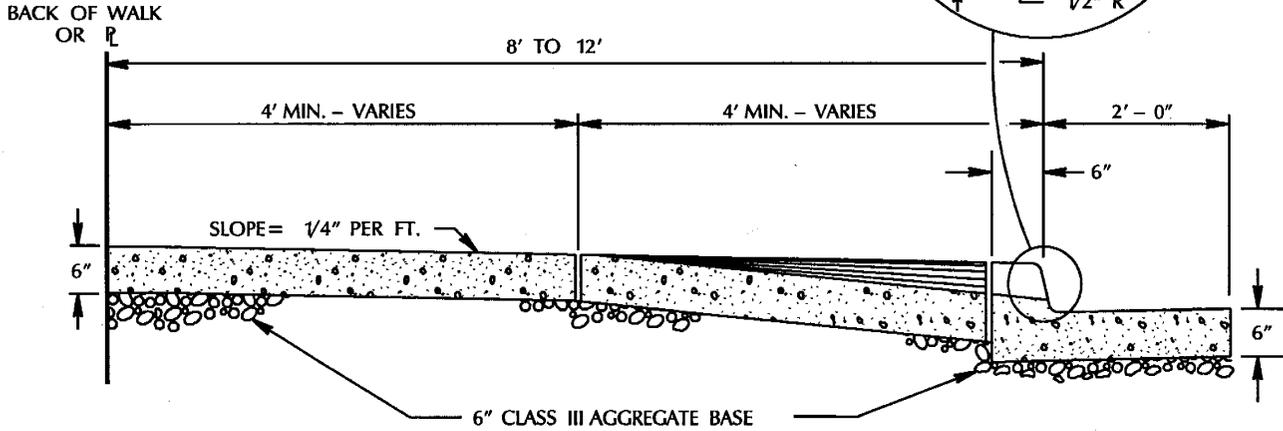
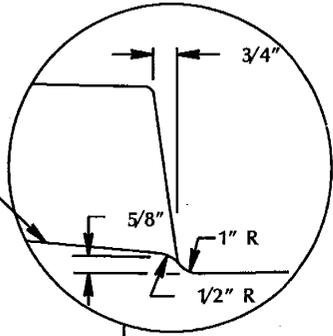
WEAKENED PLANE JOINT OR CUT JOINT
 1/8" WIDE, 2" DEEP
 10' INTERVALS (MAX.)

16' - 0" MIN. - 32' - 0" MAX. (COMMERCIAL)
 12' - 0" MIN. - 26' - 0" MAX. (RESIDENTIAL)

BETWEEN DRIVEWAYS
 1' - 6"
 6' MIN. (COMMERCIAL)
 4' MIN. (RESIDENTIAL)

*** NOTE:**
 SCORE MARKS NOT TO EXCEED 4'-0" O.C., USE
 MECHANICAL SEPARATOR AT EVERY OTHER SCORE MARK.

S = 1.5" PER FOOT



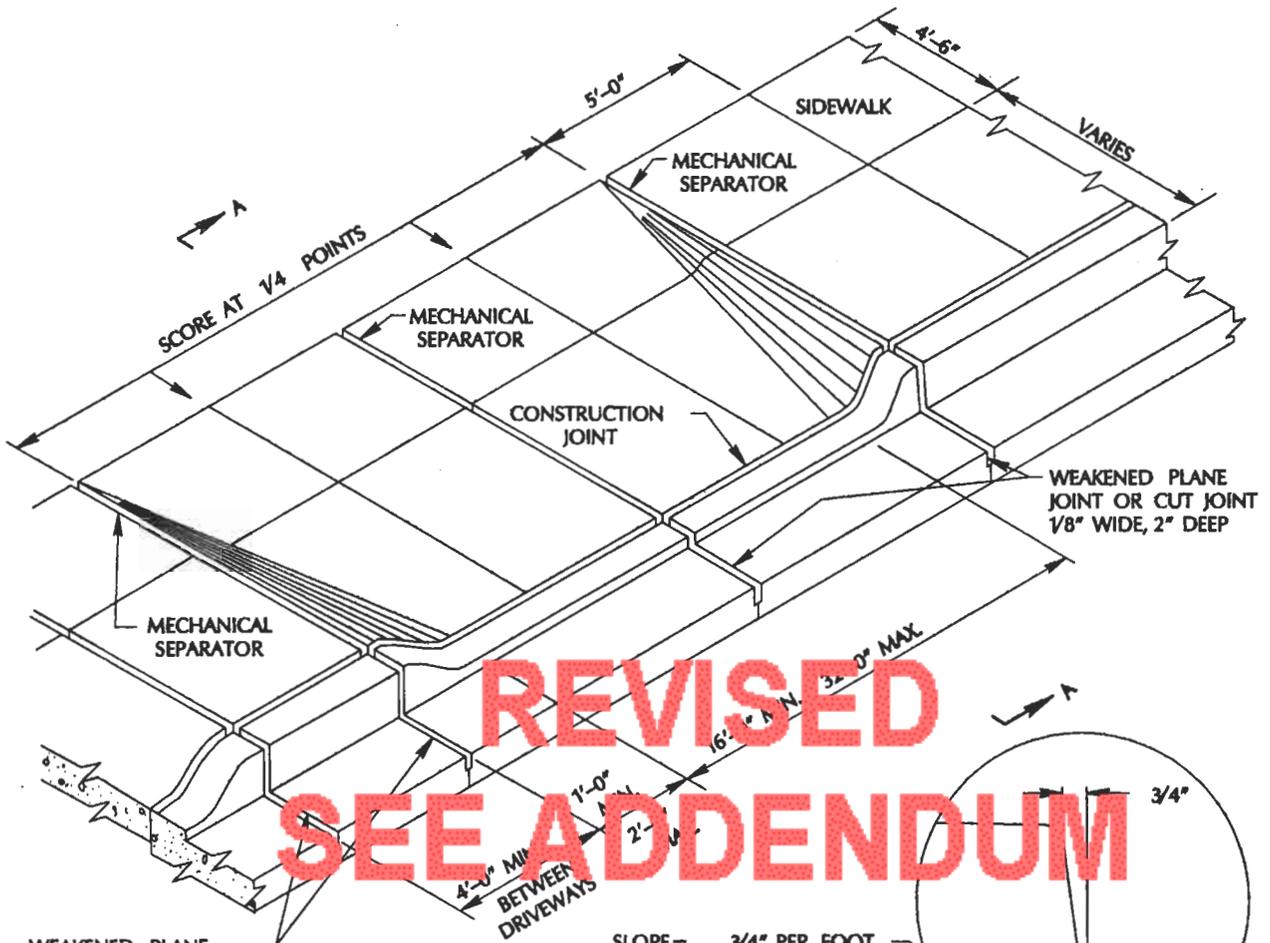
SECTION A-A

APPROVED BY
[Signature]
 DATE
 4-27-05

RESIDENTIAL AND
 COMMERCIAL DRIVEWAY
 ATTACHED SIDEWALK (8' to 12')
 DEPARTMENT OF PUBLIC WORKS



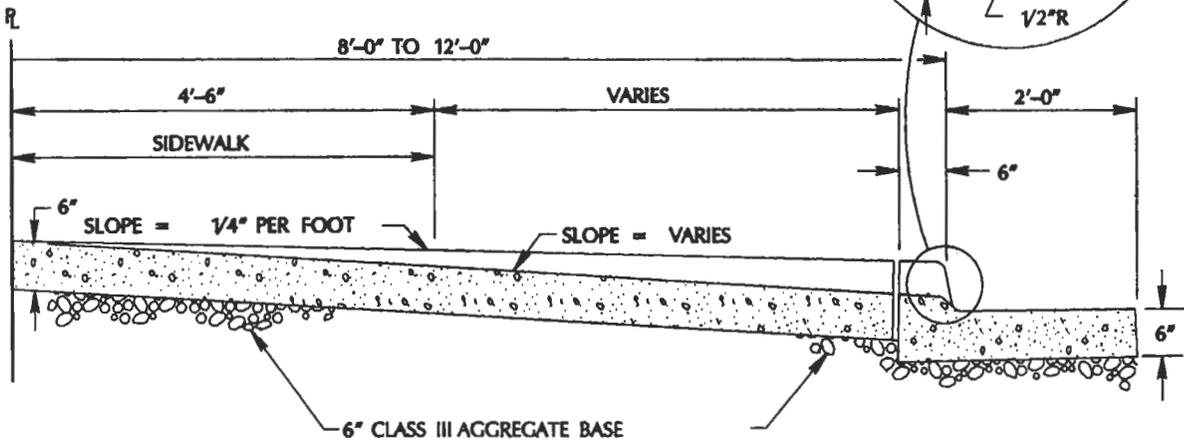
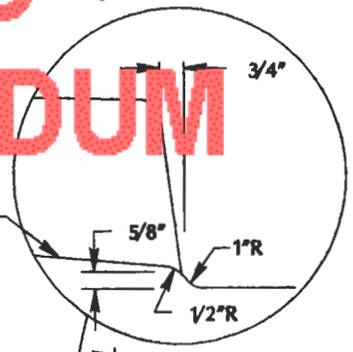
DRAWING NO.
 R-6



WEAKENED PLANE JOINT OR CUT JOINT
1/8" WIDE, 2" DEEP

**REVISED
SEE ADDENDUM**

SLOPE = 3/4" PER FOOT



SECTION A-A

APPROVED BY

JDM

DATE

4/10/92

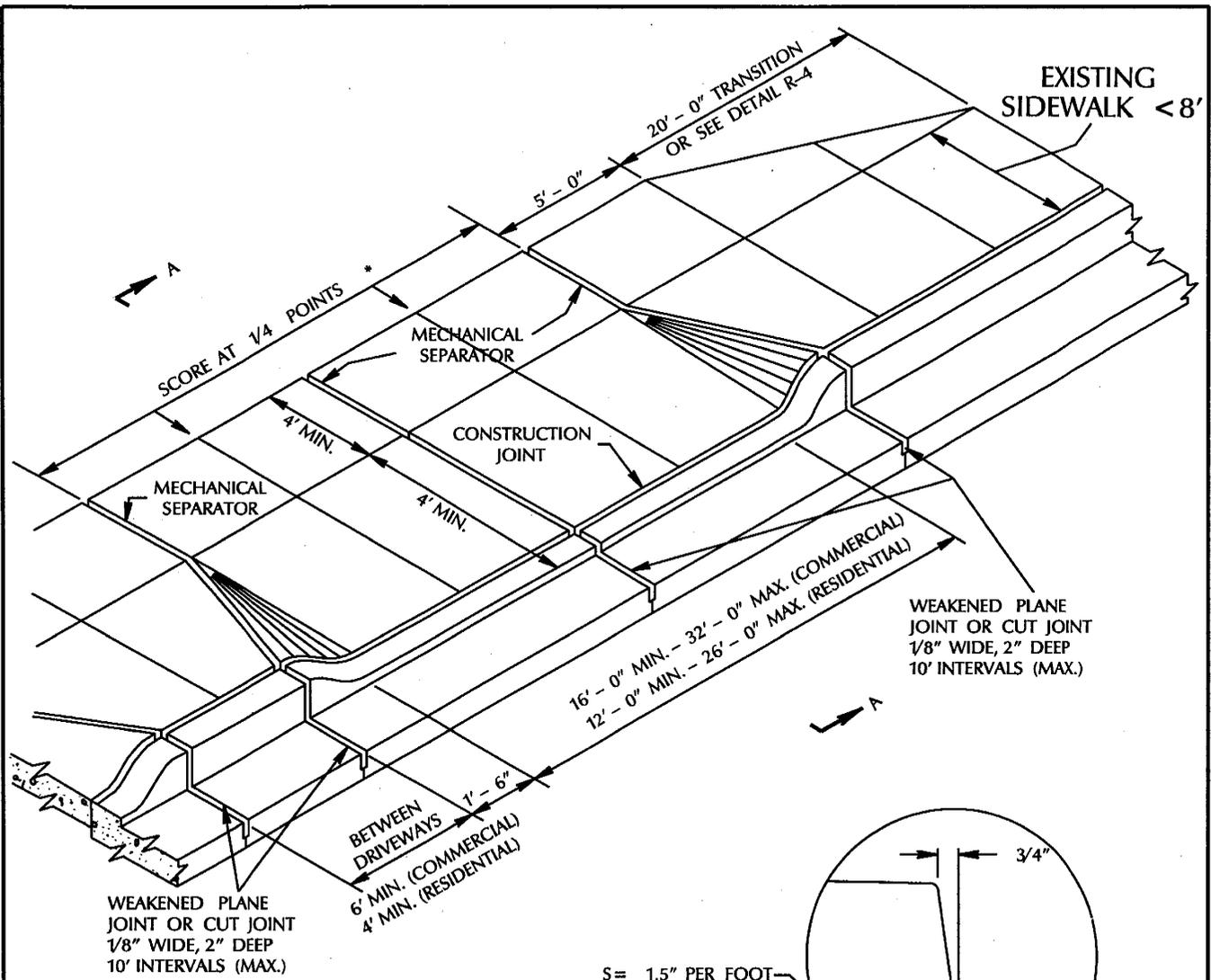
COMMERCIAL DRIVEWAY
DETACHED SIDEWALK

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

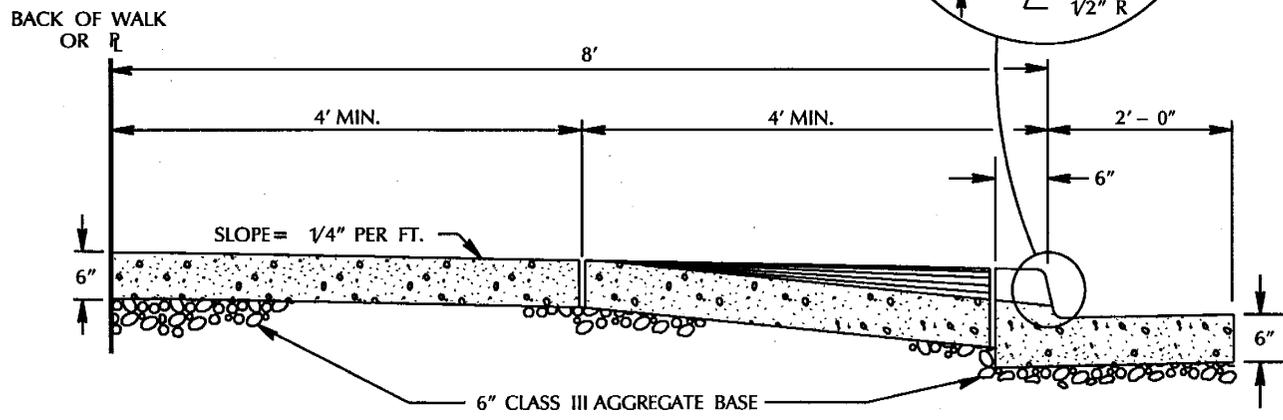
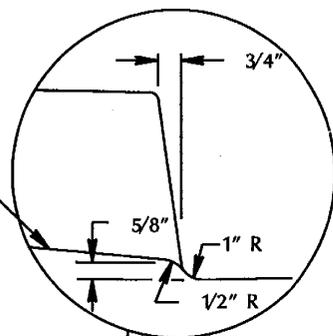
R-7



WEAKENED PLANE JOINT OR CUT JOINT
1/8" WIDE, 2" DEEP
10' INTERVALS (MAX.)

S = 1.5" PER FOOT

* NOTE: SCORE MARKS NOT TO EXCEED 4'-0" O.C., USE MECHANICAL SEPARATOR AT EVERY OTHER SCORE MARK.



** NOTE: ADDITIONAL ROW MAY BE REQUIRED. ALTERNATIVE DRIVEWAY DESIGNS MEETING ADA REQUIREMENTS ARE SUBJECT TO APPROVAL BY THE DIRECTOR OF PUBLIC WORKS.

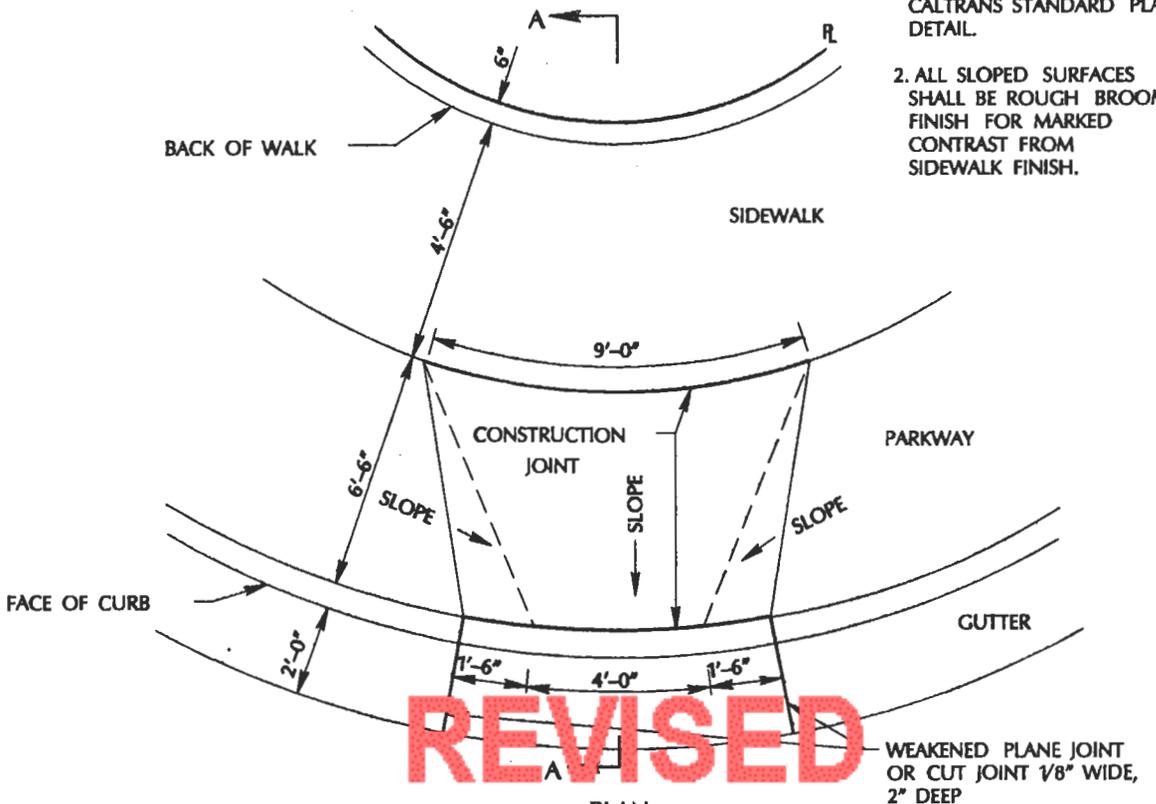
SECTION A-A

APPROVED BY 	RESIDENTIAL AND COMMERCIAL DWY. (FOR EXISTING ATTACHED SIDEWALK < 8')	 CITY OF SAN JOSE CAPITOL OF SILICON VALLEY	DRAWING NO. R-7
DATE 4-27-05	DEPARTMENT OF PUBLIC WORKS		

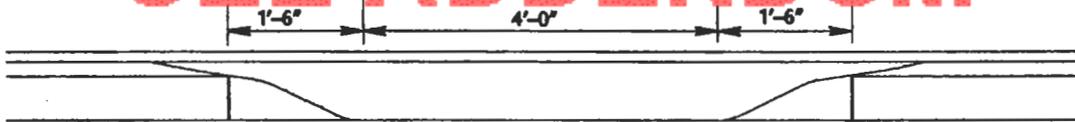
NOTES:

1. GROOVING DETAIL PER CALTRANS STANDARD PLANS DETAIL.

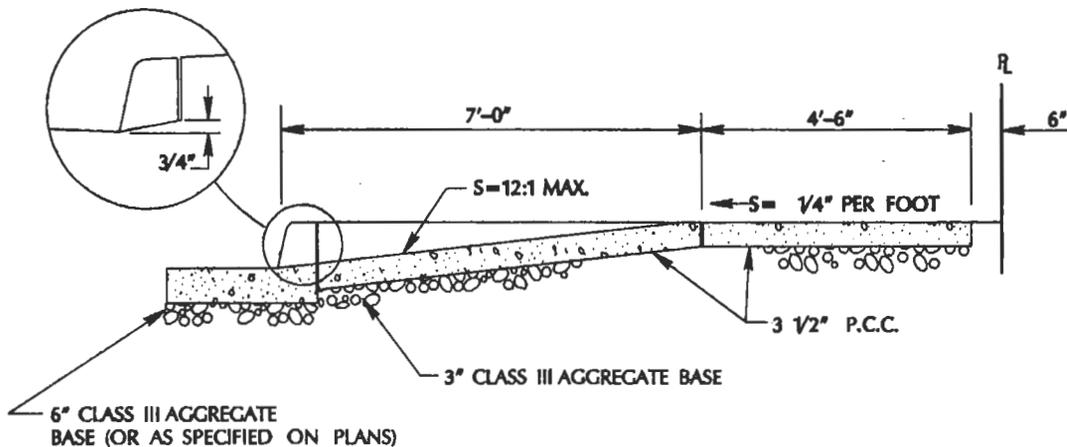
2. ALL SLOPED SURFACES SHALL BE ROUGH BROOM FINISH FOR MARKED CONTRAST FROM SIDEWALK FINISH.



REVISED
SEE ADDENDUM



ELEVATION



SECTION A-A

APPROVED BY

JDM

DATE

4/10/92

**WHEELCHAIR RAMP
CENTER OF RETURN,
DETACHED SIDEWALK**

DEPARTMENT OF PUBLIC WORKS



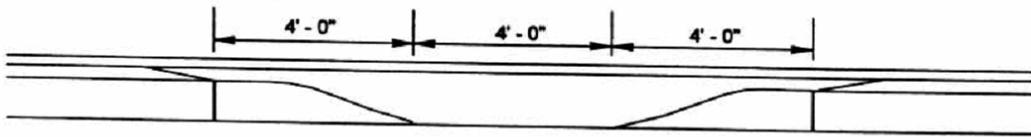
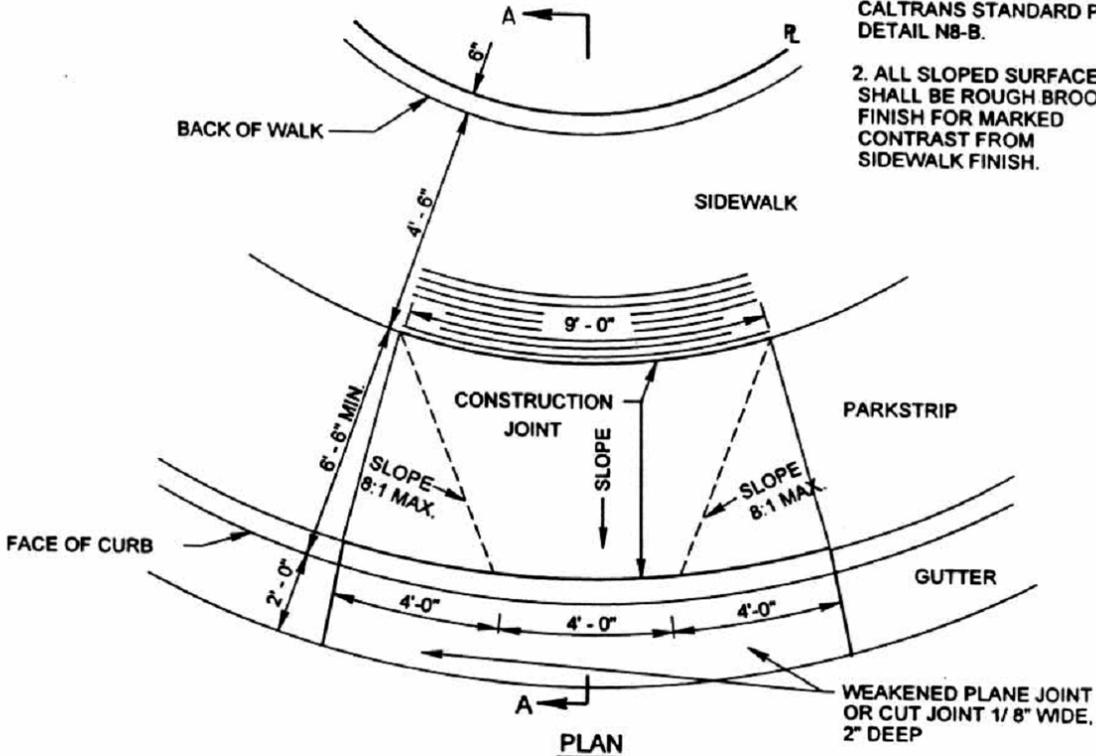
DRAWING NO.

R-8

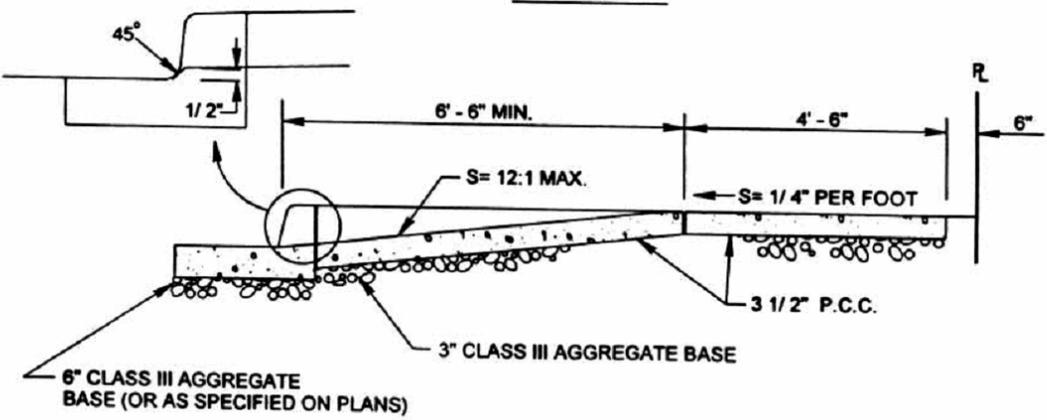
NOTES:

1. GROOVING DETAIL PER CALTRANS STANDARD PLANS DETAIL N8-B.

2. ALL SLOPED SURFACES SHALL BE ROUGH BROOM FINISH FOR MARKED CONTRAST FROM SIDEWALK FINISH.

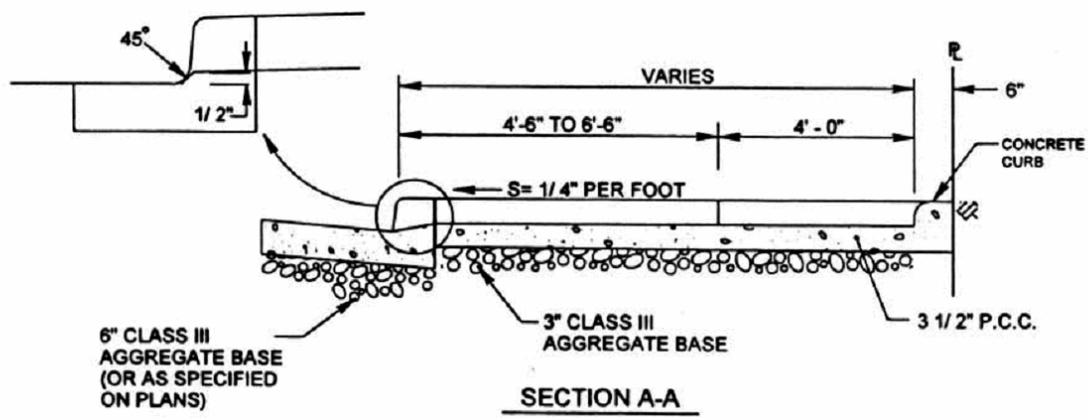
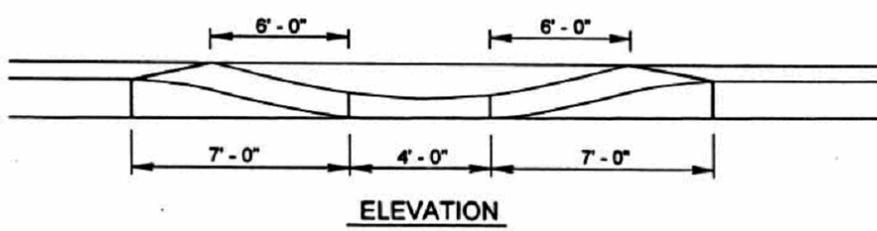
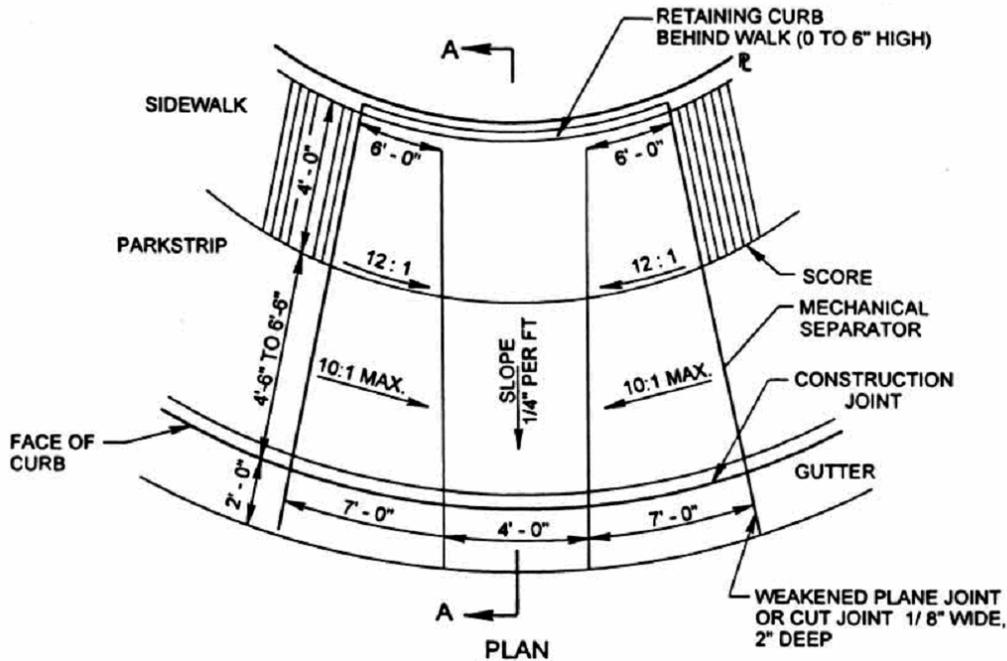


ELEVATION



SECTION A-A

APPROVED BY <i>Cm</i>	<p align="center">WHEELCHAIR RAMP CENTER OF RETURN, DETACHED SIDEWALK, 6' 6" MIN. PARKSTRIP</p> <p align="center">DEPARTMENT OF PUBLIC WORKS</p>		DRAWING NO. R-8
DATE 7/5/01			



NOTES:

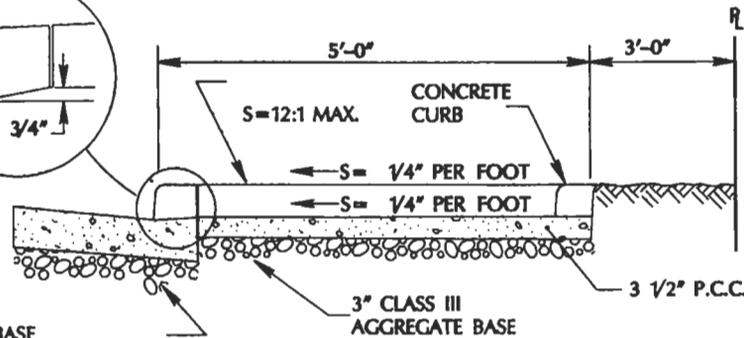
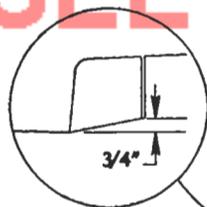
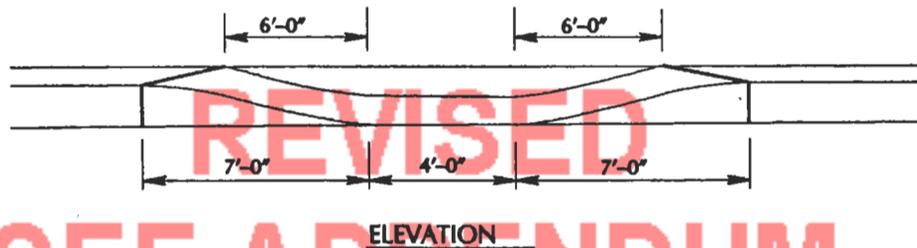
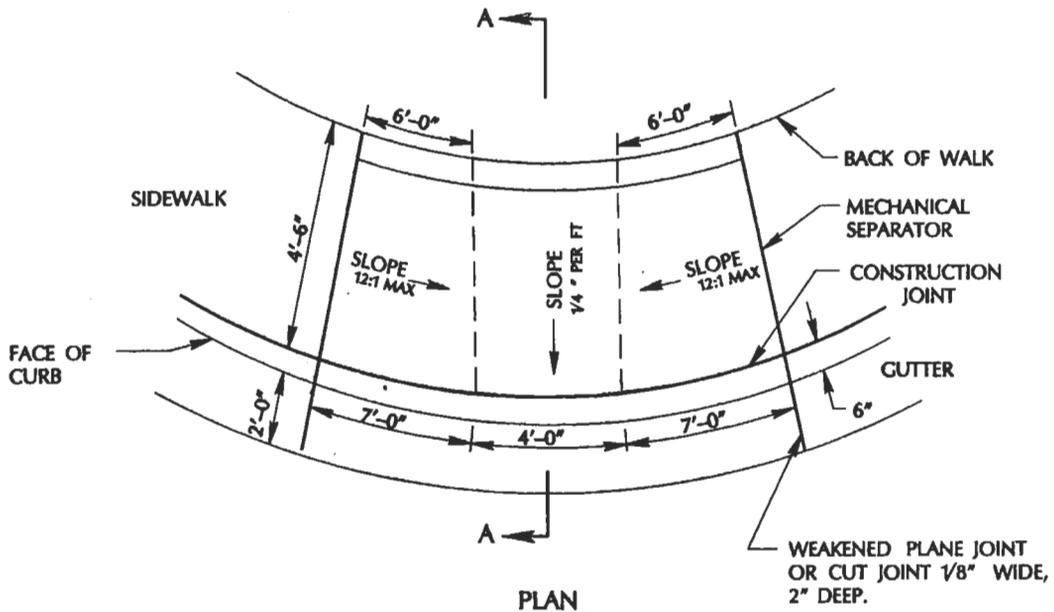
1. GROOVING DETAIL PER CALTRANS STANDARD PLANS DETAIL N8-B.
2. ALL SLOPED SURFACES SHALL BE ROUGH BROOM FINISH FOR MARKED CONTRAST FROM SIDEWALK FINISH.

APPROVED BY
em
DATE
7/5/01

WHEELCHAIR RAMP
CENTER OF RETURN, DETACHED
SIDEWALK 4' 6" - 6' 6" PARKSTRIP
DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
R-8A



6" CLASS III AGGREGATE BASE
(OR AS SPECIFIED ON PLANS)

SECTION A-A

NOTES:

1. GROOVING DETAIL PER CALTRANS STANDARD PLANS DETAIL.
2. ALL SLOPED SURFACES SHALL BE ROUGH BROOM FINISH FOR MARKED CONTRAST FROM SIDEWALK FINISH.

APPROVED BY

JDM

DATE

4/10/92

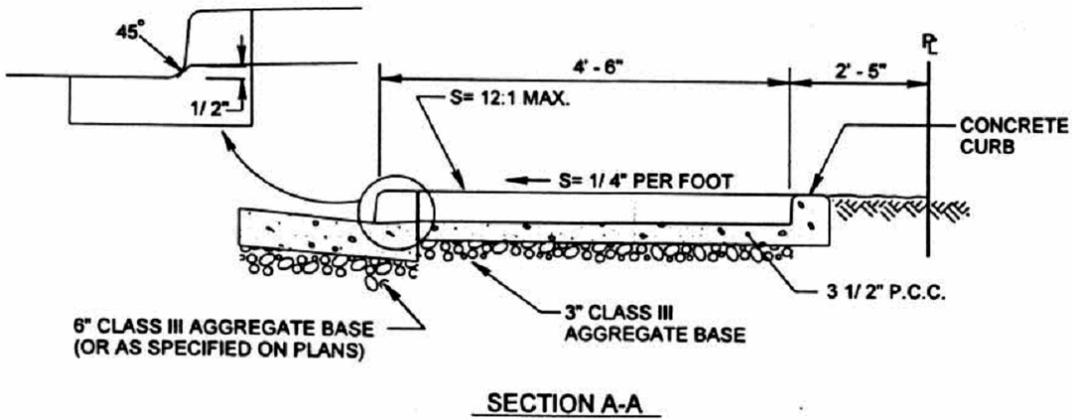
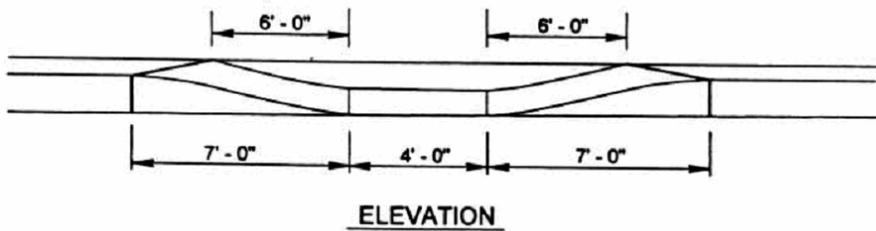
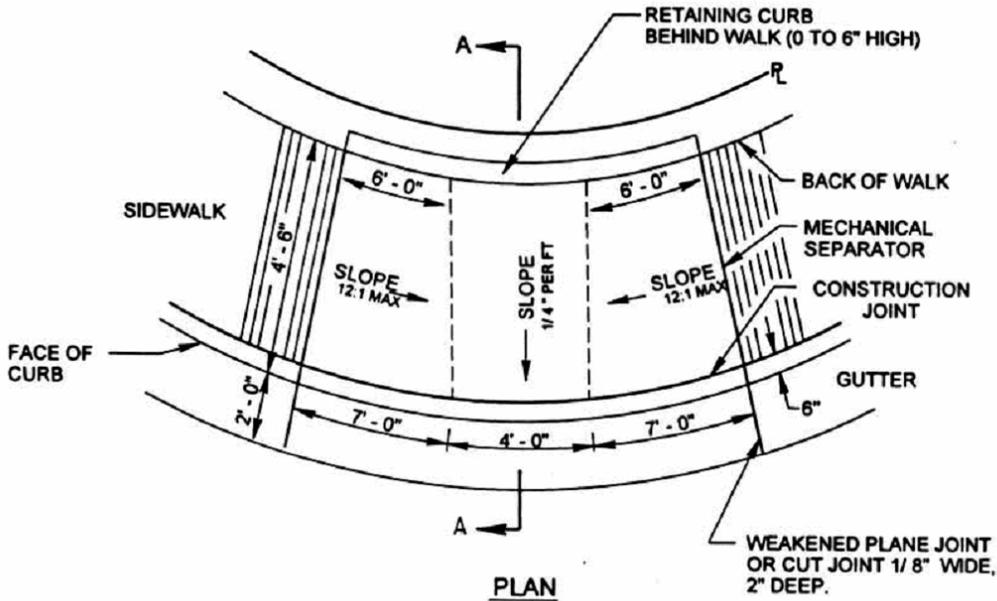
**WHEELCHAIR RAMP
CENTER OF RETURN,
4'-6" ATTACHED SIDEWALK**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

R-9



NOTES:

- 1. GROOVING DETAIL PER CALTRANS STANDARD PLANS DETAIL N8-B.
- 2. ALL SLOPED SURFACES SHALL BE ROUGH BROOM FINISH FOR MARKED CONTRAST FROM SIDEWALK FINISH.

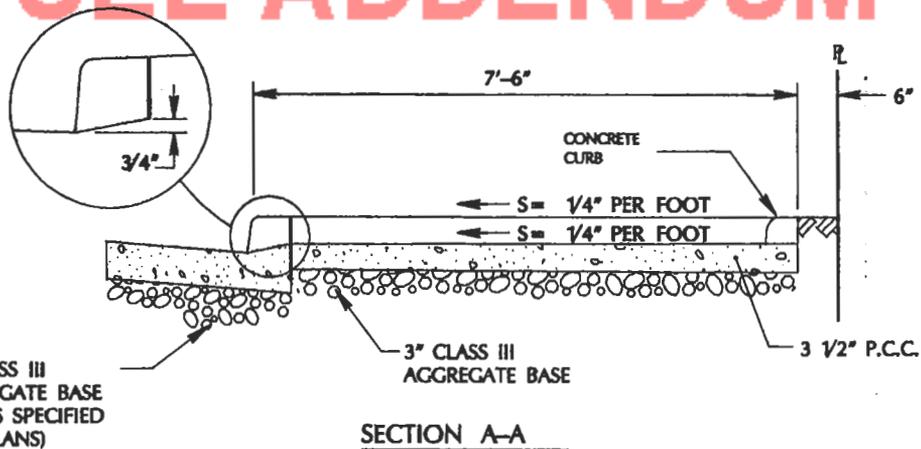
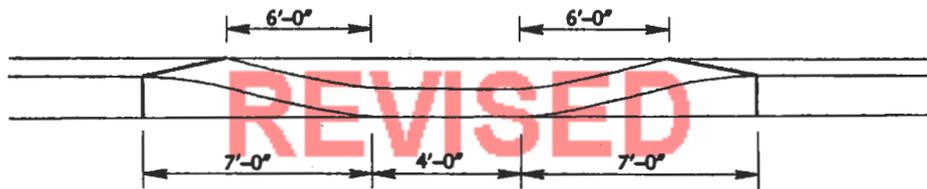
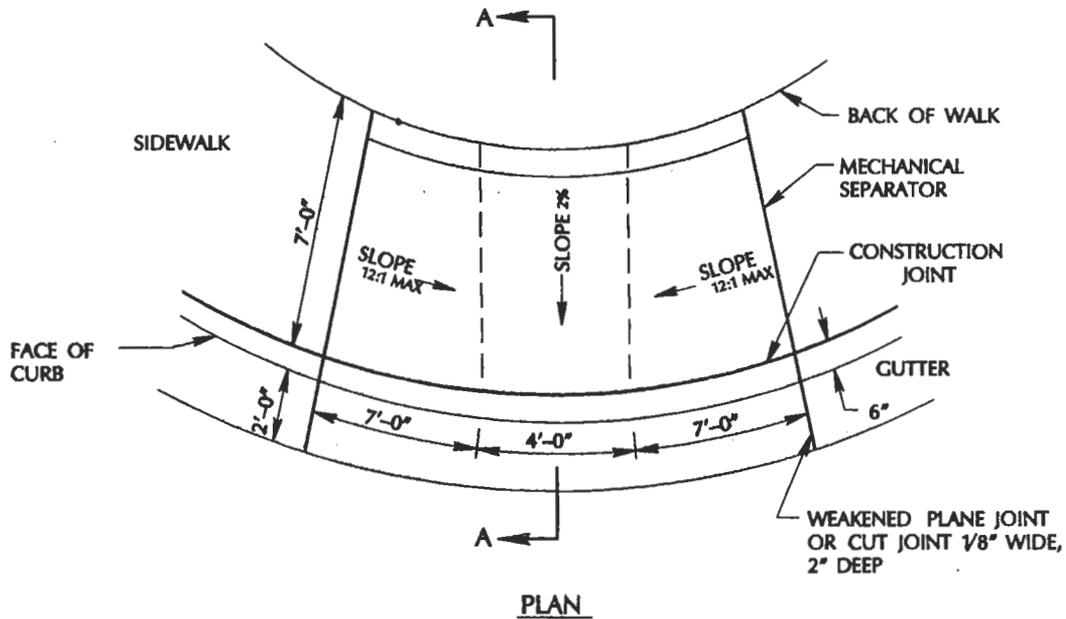
APPROVED BY
cm
DATE
7/5/01

**WHEELCHAIR RAMP
CENTER OF RETURN,
4' ATTACHED SIDEWALK**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
R-9

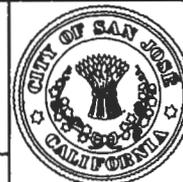


NOTES:

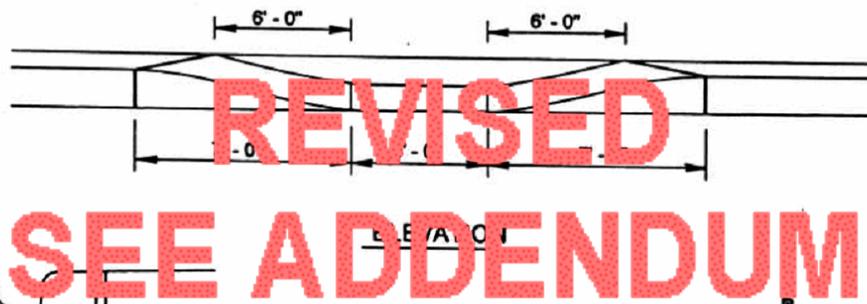
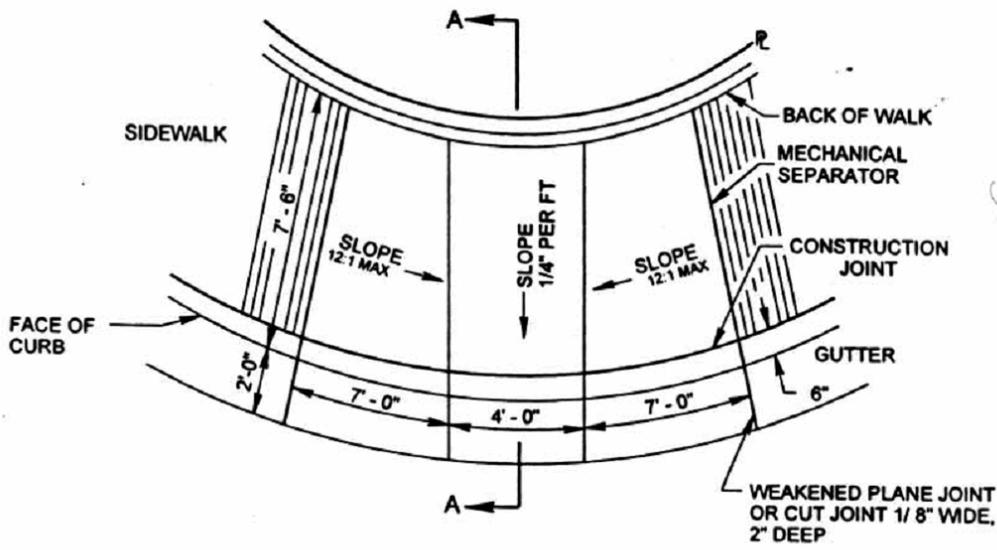
1. GROOVING DETAIL PER CALTRANS STANDARD PLANS DETAIL.
2. ALL SLOPED SURFACES SHALL BE ROUGH BROOM FINISH FOR MARKED CONTRAST FROM SIDEWALK FINISH.

APPROVED BY
JDM
 DATE
 4/10/92

**WHEELCHAIR RAMP
 CENTER OF RETURN
 7' ATTACHED SIDEWALK**
 DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
R-10



NOTES:

1. GROOVING DETAIL PER CALTRANS STANDARD PLANS DETAIL N8-B.
2. ALL SLOPED SURFACES SHALL BE ROUGH BROOM FINISH FOR MARKED CONTRAST FROM SIDEWALK FINISH.

APPROVED BY

Cm

DATE

7/5/01

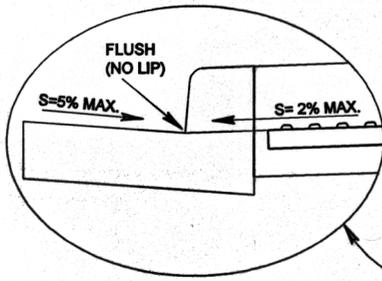
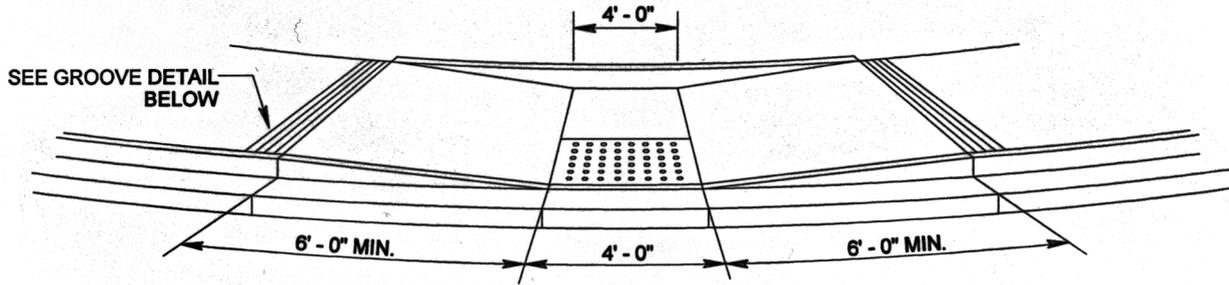
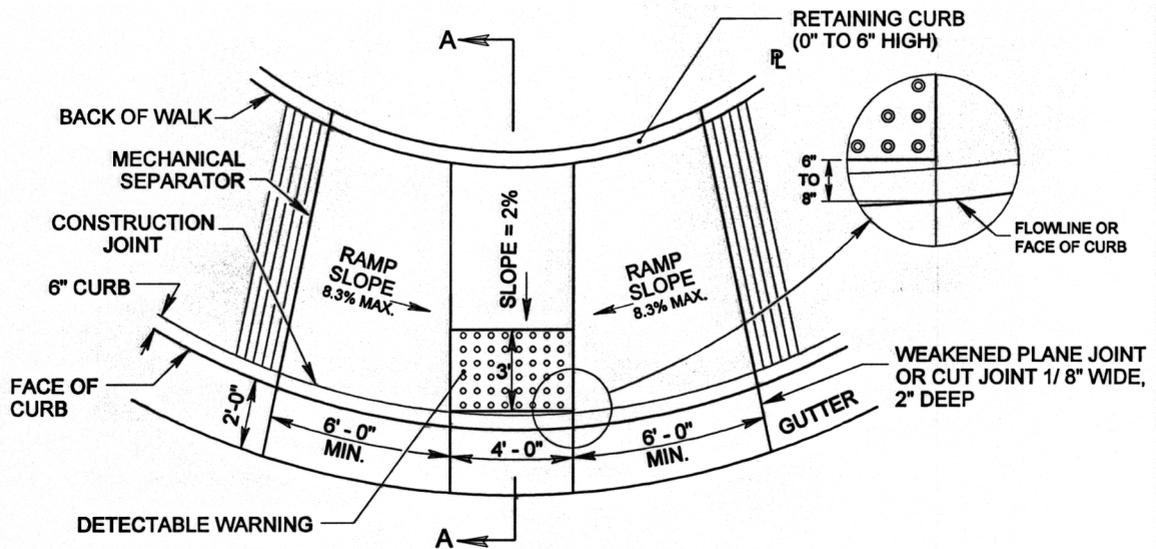
WHEELCHAIR RAMP
CENTER OF RETURN,
7' ATTACHED SIDEWALK

DEPARTMENT OF PUBLIC WORKS

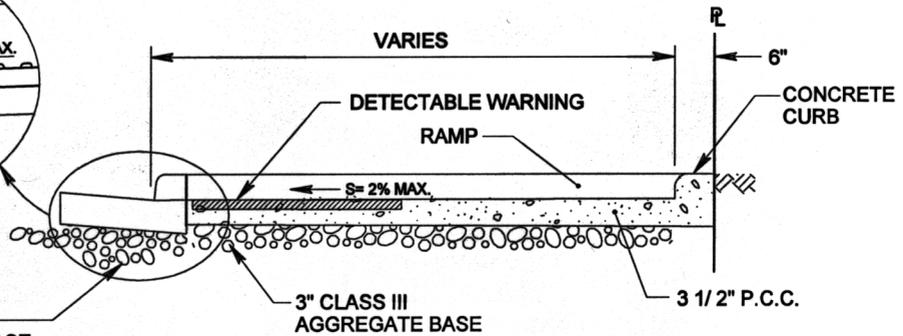


DRAWING NO.

R-10



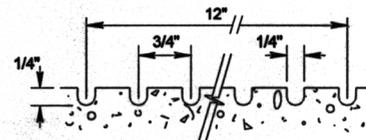
6" CLASS III
AGGREGATE BASE
(OR AS SPECIFIED
ON PLANS)



SECTION A-A

NOTES:

1. ALL SLOPED SURFACES SHALL BE ROUGH BROOM FINISH FOR MARKED CONTRAST FROM SIDEWALK FINISH.
2. DETECTABLE WARNING SHALL BE BLACK CAST-IN-TACT CONCRETE TRUNCATED DOME PANELS AS MANUFACTURED BY MASCO OR EQUAL.
3. TRUNCATED DOMES SHALL BE ALIGNED AS SHOWN ON THIS DETAIL.



GROOVE DETAIL

APPROVED BY

FD

DATE

2/24/06

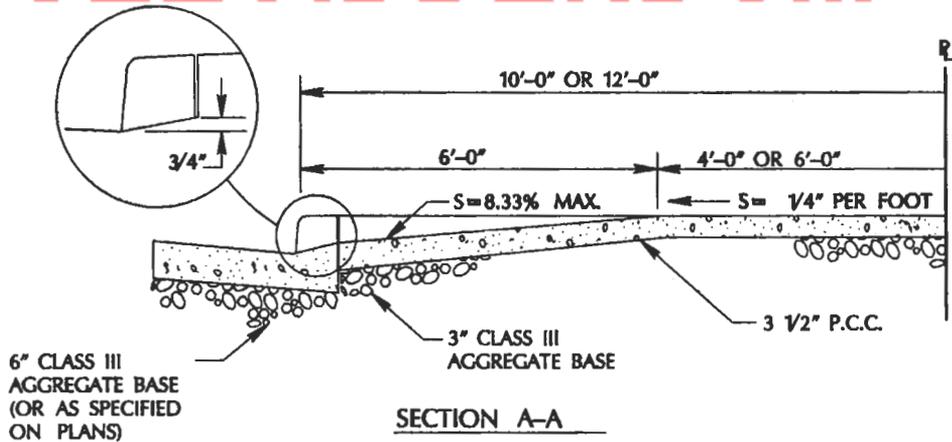
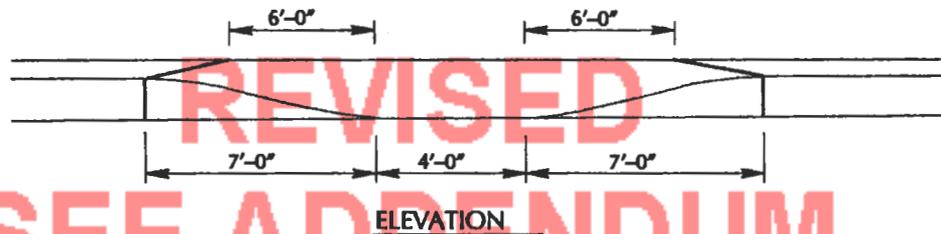
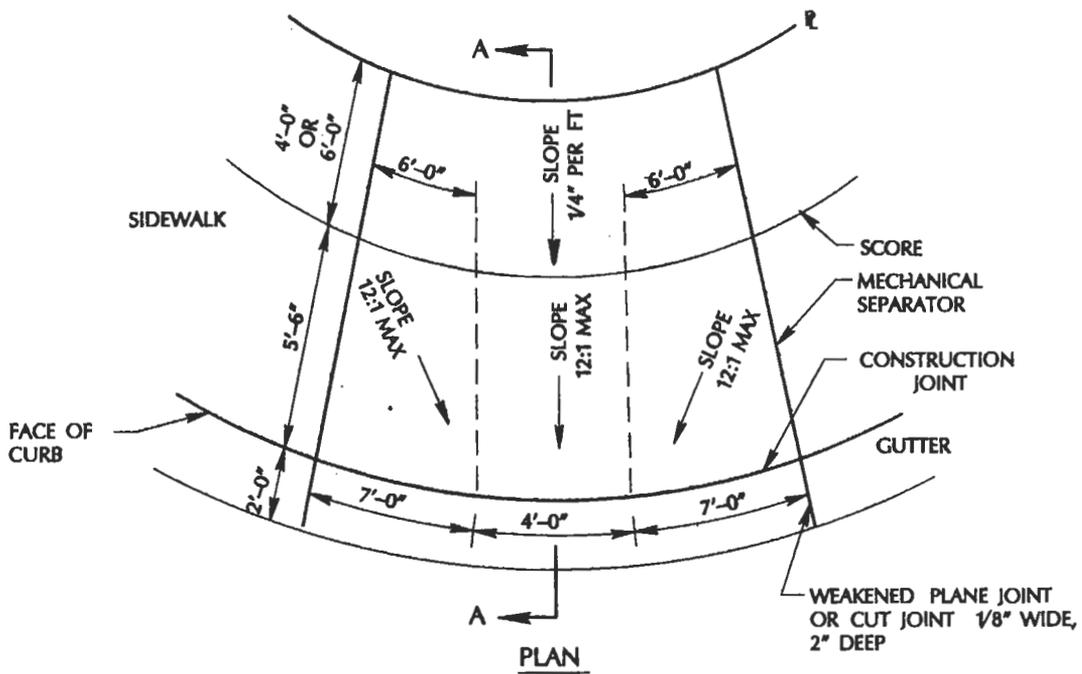
**WHEELCHAIR RAMP
CENTER OF RETURN,
LESS THAN 10' WIDE SIDEWALK CORRIDOR**

DEPARTMENT OF PUBLIC WORKS



DRAWING
NO.

R-10



NOTES:

1. GROOVING DETAIL PER CALTRANS STANDARD PLANS DETAIL.
2. ALL SLOPED SURFACES SHALL BE ROUGH BROOM FINISH FOR MARKED CONTRAST FROM SIDEWALK FINISH.

APPROVED BY

J. L. M.

DATE

4/10/72

**WHEELCHAIR RAMP
CENTER OF RETURN
10' OR 12' ATTACHED SIDEWALK**

DEPARTMENT OF PUBLIC WORKS



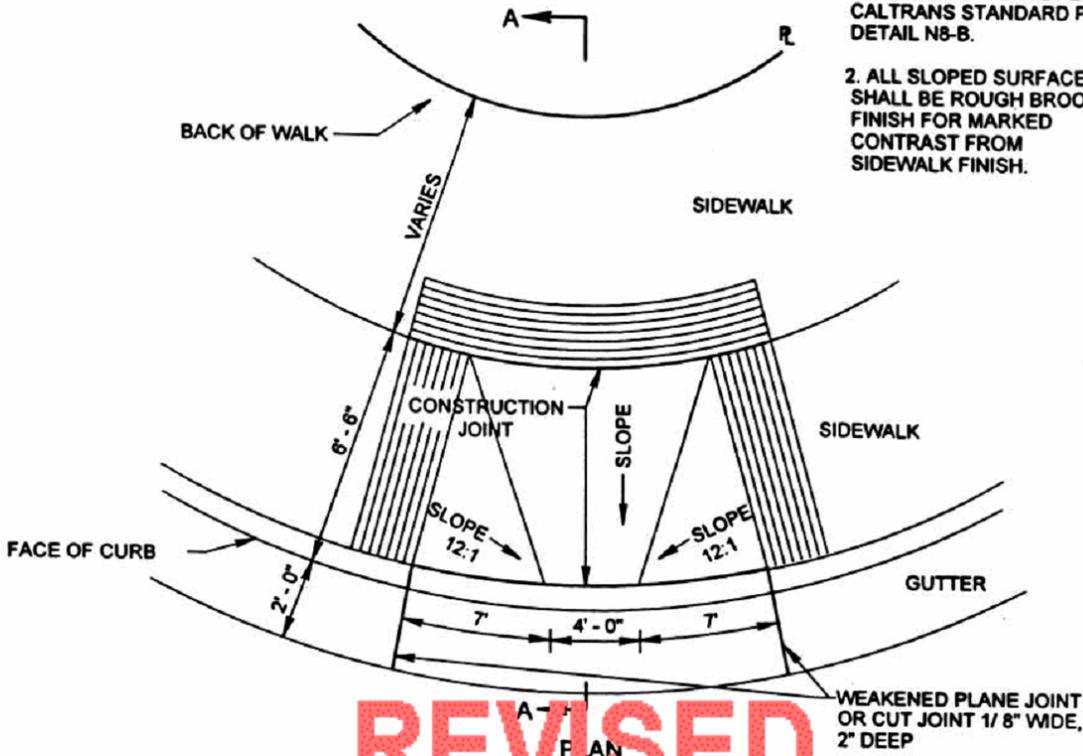
DRAWING NO.

R-11

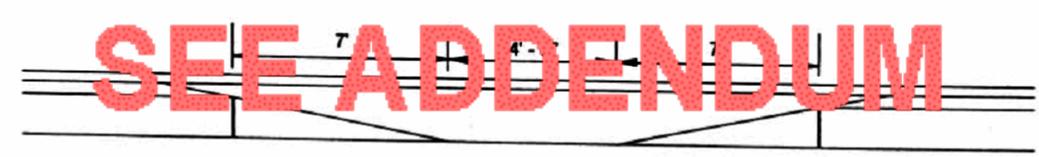
NOTES:

1. GROOVING DETAIL PER CALTRANS STANDARD PLANS DETAIL N8-B.

2. ALL SLOPED SURFACES SHALL BE ROUGH BROOM FINISH FOR MARKED CONTRAST FROM SIDEWALK FINISH.



REVISED
SEE ADDENDUM

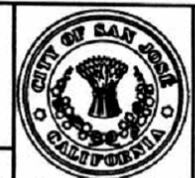


ELEVATION

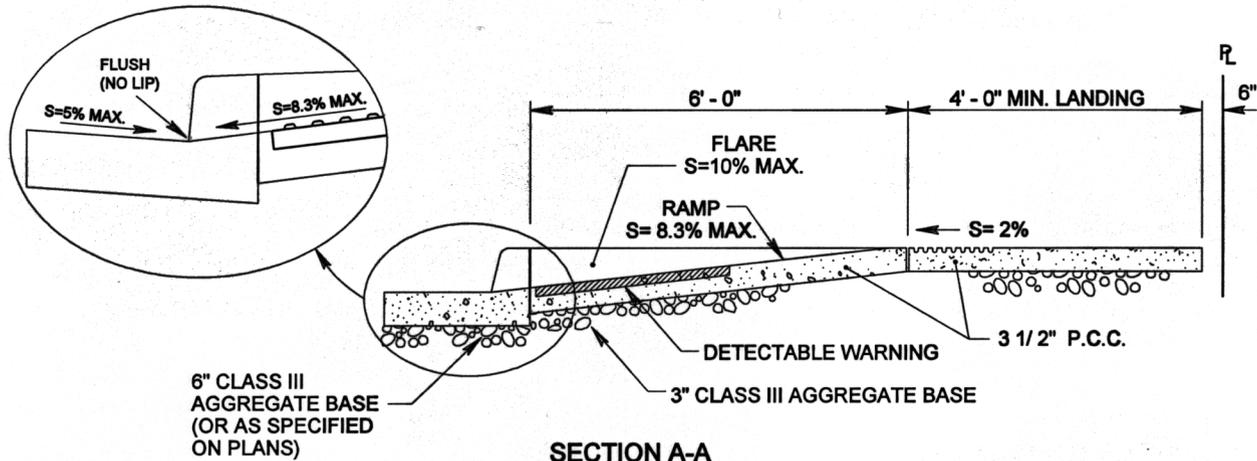
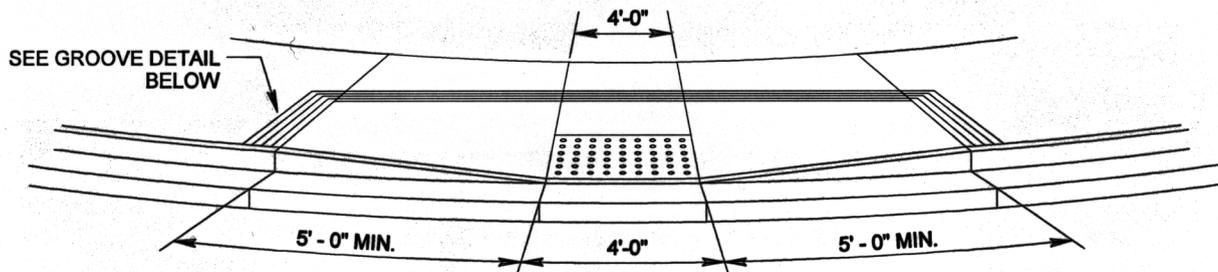
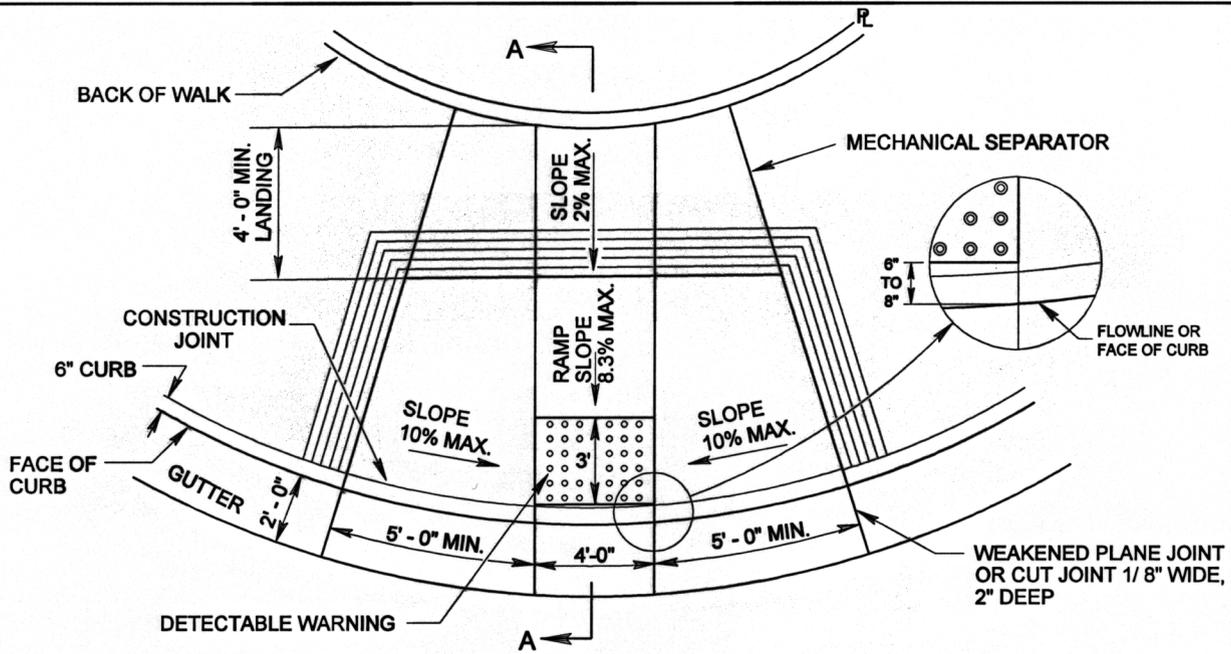
SECTION A-A

APPROVED BY
cm
DATE
7/5/01

**WHEELCHAIR RAMP
CENTER OF RETURN,
10' OR 12' ATTACHED SIDEWALK**
DEPARTMENT OF PUBLIC WORKS

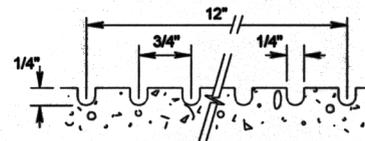


DRAWING NO.
R-11



NOTES:

1. ALL SLOPED SURFACES SHALL BE ROUGH BROOM FINISH FOR MARKED CONTRAST FROM SIDEWALK FINISH.
2. DETECTABLE WARNING SHALL BE BLACK CAST-IN-TACT CONCRETE TRUNCATED DOME PANELS AS MANUFACTURED BY MASCO OR EQUAL.
3. TRUNCATED DOMES SHALL BE ALIGNED AS SHOWN ON THIS DETAIL.



APPROVED BY

PO

DATE/

2/21/02

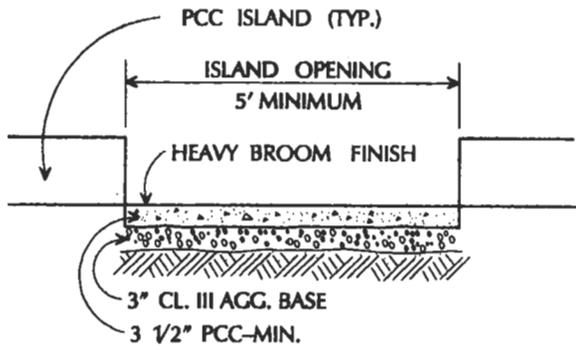
**WHEELCHAIR RAMP
CENTER OF RETURN,
10' OR WIDER SIDEWALK CORRIDOR**

DEPARTMENT OF PUBLIC WORKS

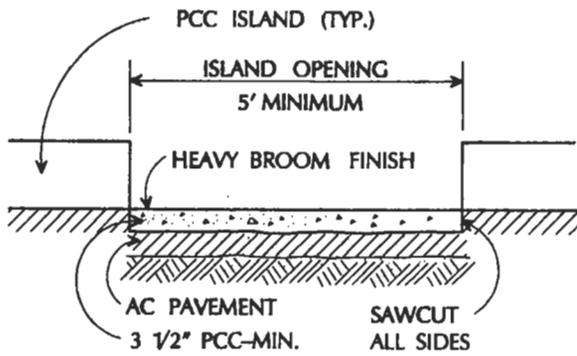


DRAWING NO.

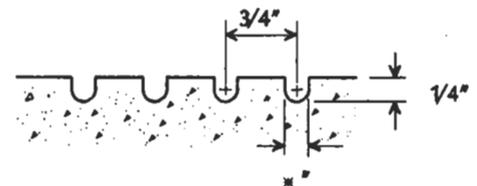
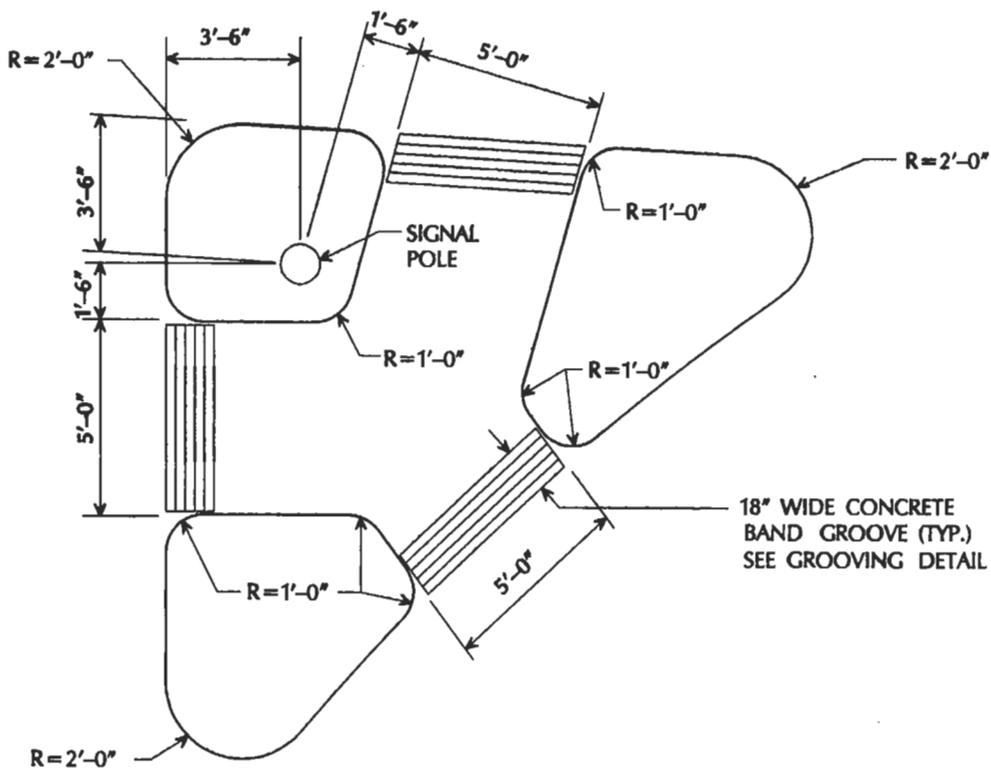
R-11



CONCRETE BAND
 ON-GRADE DETAIL



CONCRETE BAND ON
 EXISTING AC DETAIL



GROOVING DETAIL

APPROVED BY

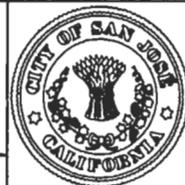
JPM

DATE

4/10/11

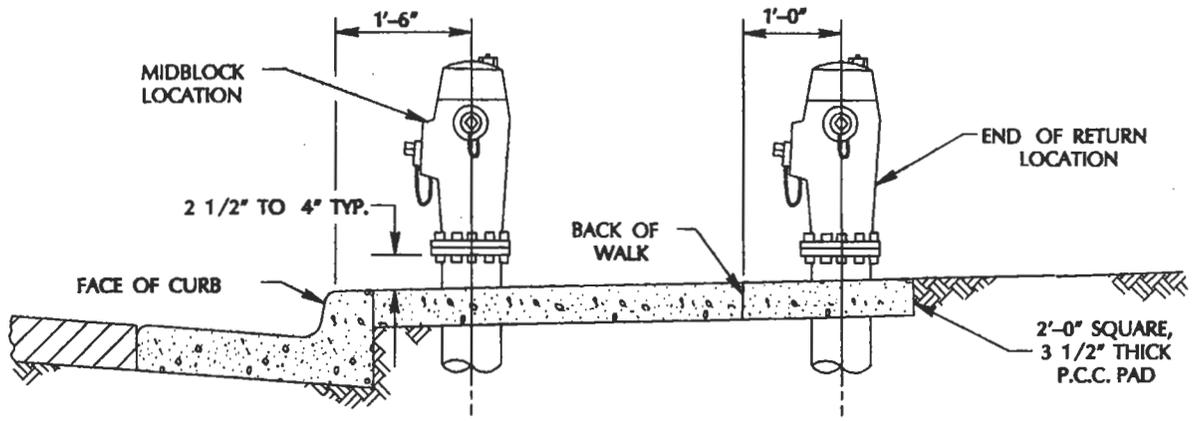
TRAFFIC ISLAND
 WALKWAY DETAIL

DEPARTMENT OF PUBLIC WORKS

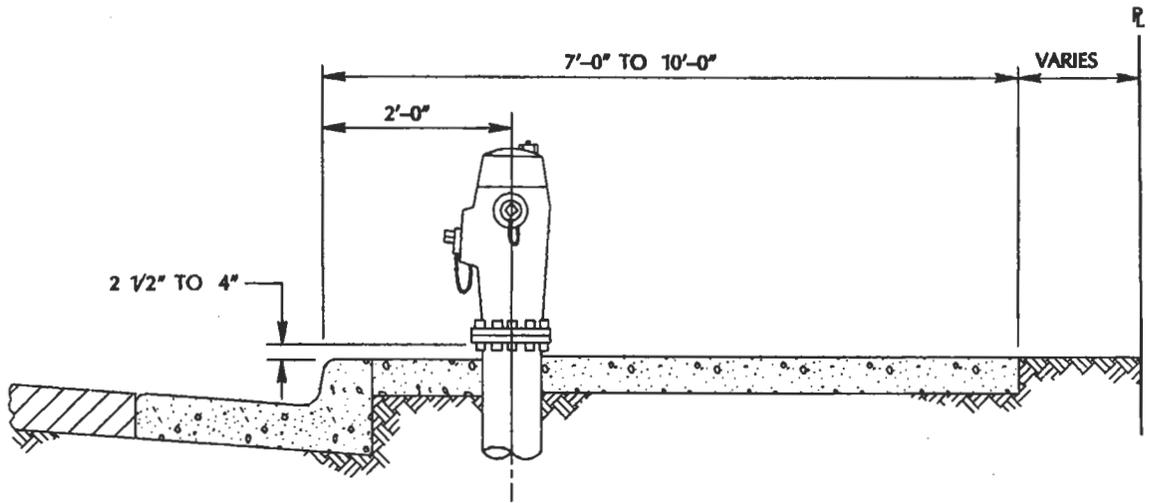


DRAWING
 NO.

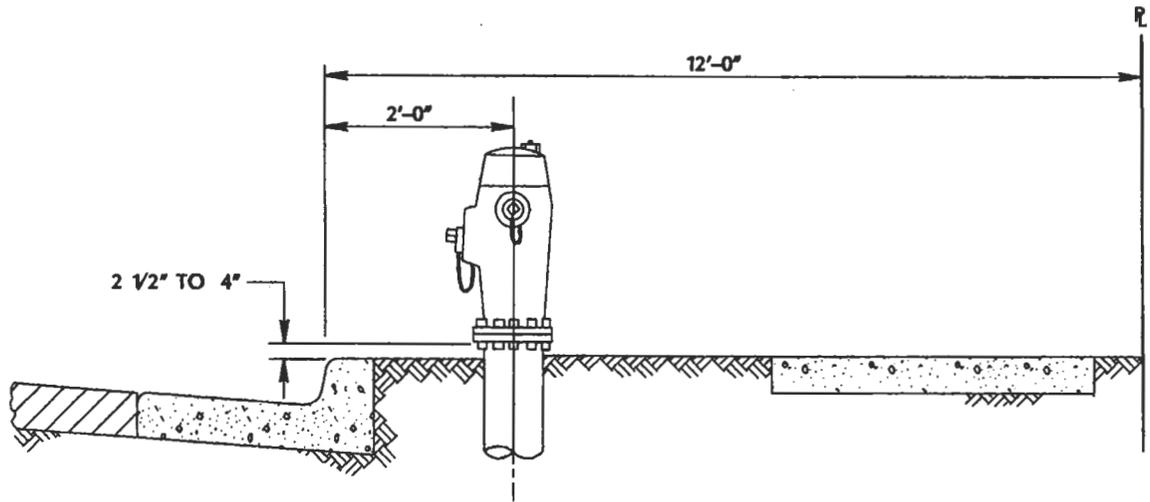
R-12



4'-6" ATTACHED RESIDENTIAL SIDEWALK



WIDE ATTACHED SIDEWALKS



DETACHED SIDEWALK

APPROVED BY

J.D.M.

DATE

4/10/92

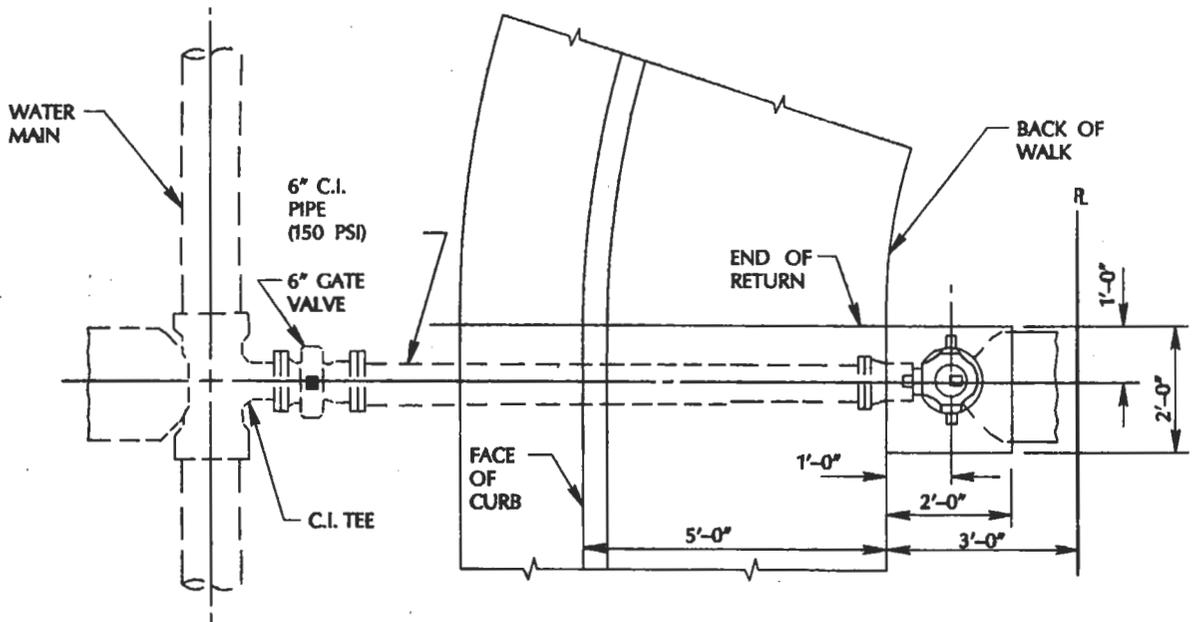
FIRE HYDRANT LOCATIONS

DEPARTMENT OF PUBLIC WORKS

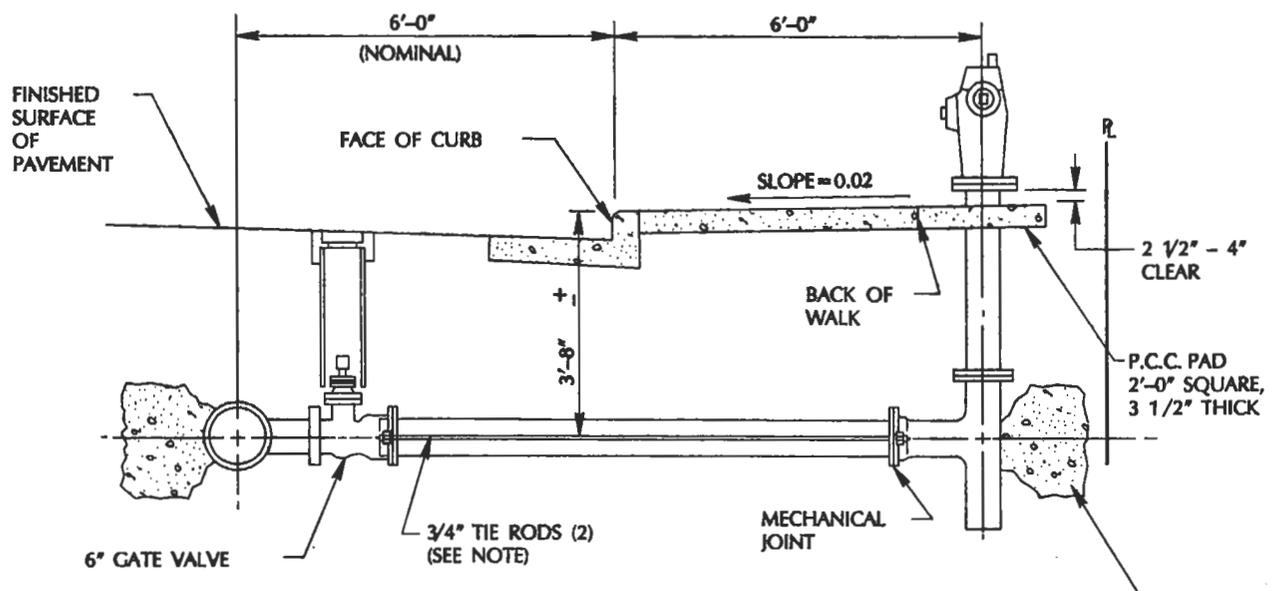


DRAWING NO.

R-13



PLAN



PROFILE

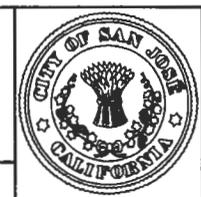
NOTE:
TIE RODS TO BE INSTALLED
IF HYDRANT TEE THRUST
BLOCK IS BEARING ON
DISTURBED SOIL.

THRUST BLOCK
3 SQ. FT. BEARING
MINIMUM

APPROVED BY
JDM
DATE
4/10/92

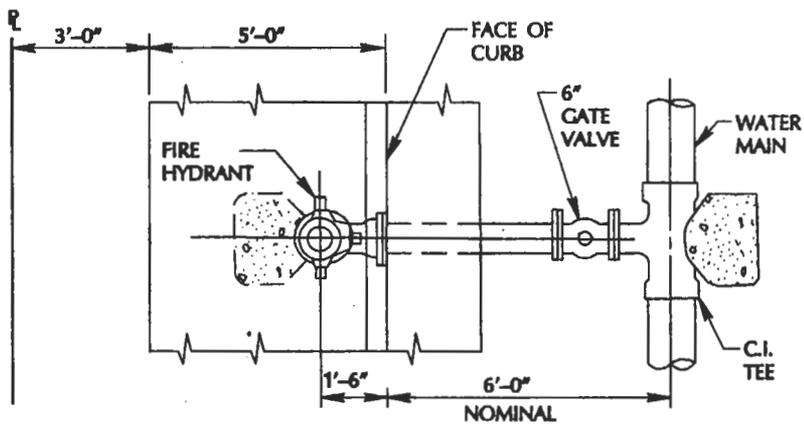
**ATTACHED RESIDENTIAL SIDEWALK
FIRE HYDRANT INSTALLATION-
END OF RETURN**

DEPARTMENT OF PUBLIC WORKS



DRAWING
NO.

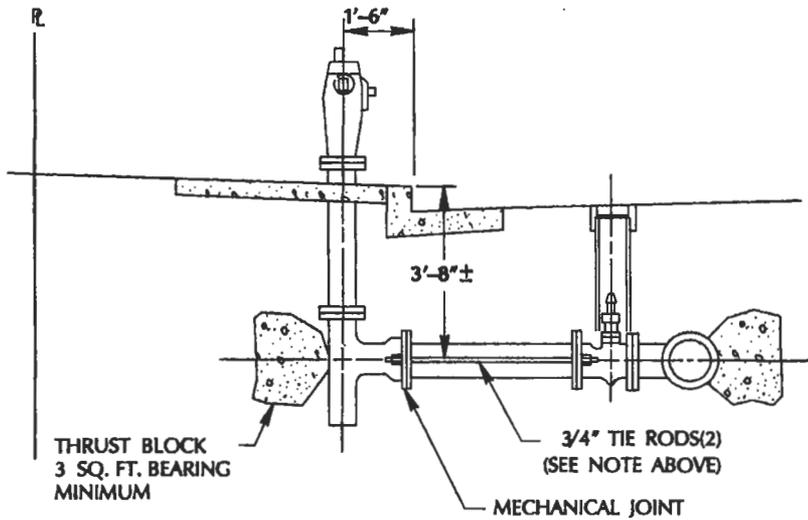
R-14



PLAN

NOTE:

TIE RODS TO BE
 INSTALLED IF HYDRANT
 TEE THRUST BLOCK
 IS BEARING ON
 DISTURBED SOIL.



PROFILE

STRAIGHT LATERAL

APPROVED BY
J D m
 DATE
 4/10/92

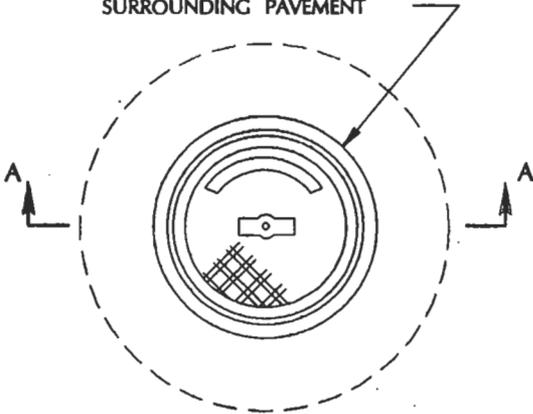
**ATTACHED RESIDENTIAL SIDEWALK
 FIRE HYDRANT
 INSTALLATION-MID BLOCK**

DEPARTMENT OF PUBLIC WORKS

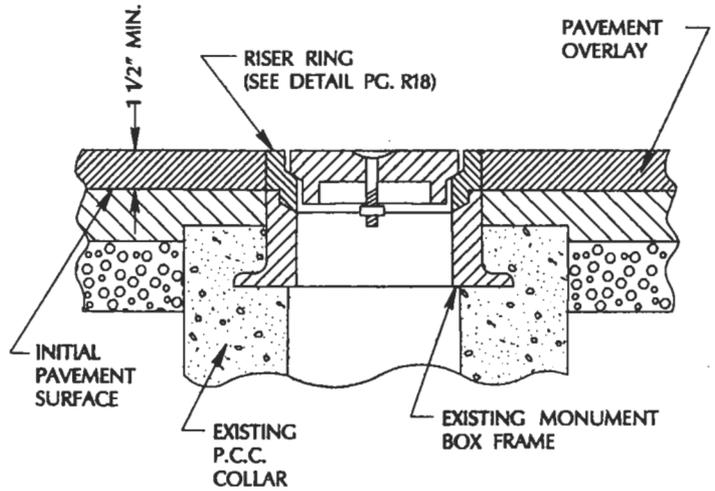


DRAWING
 NO.
R-15

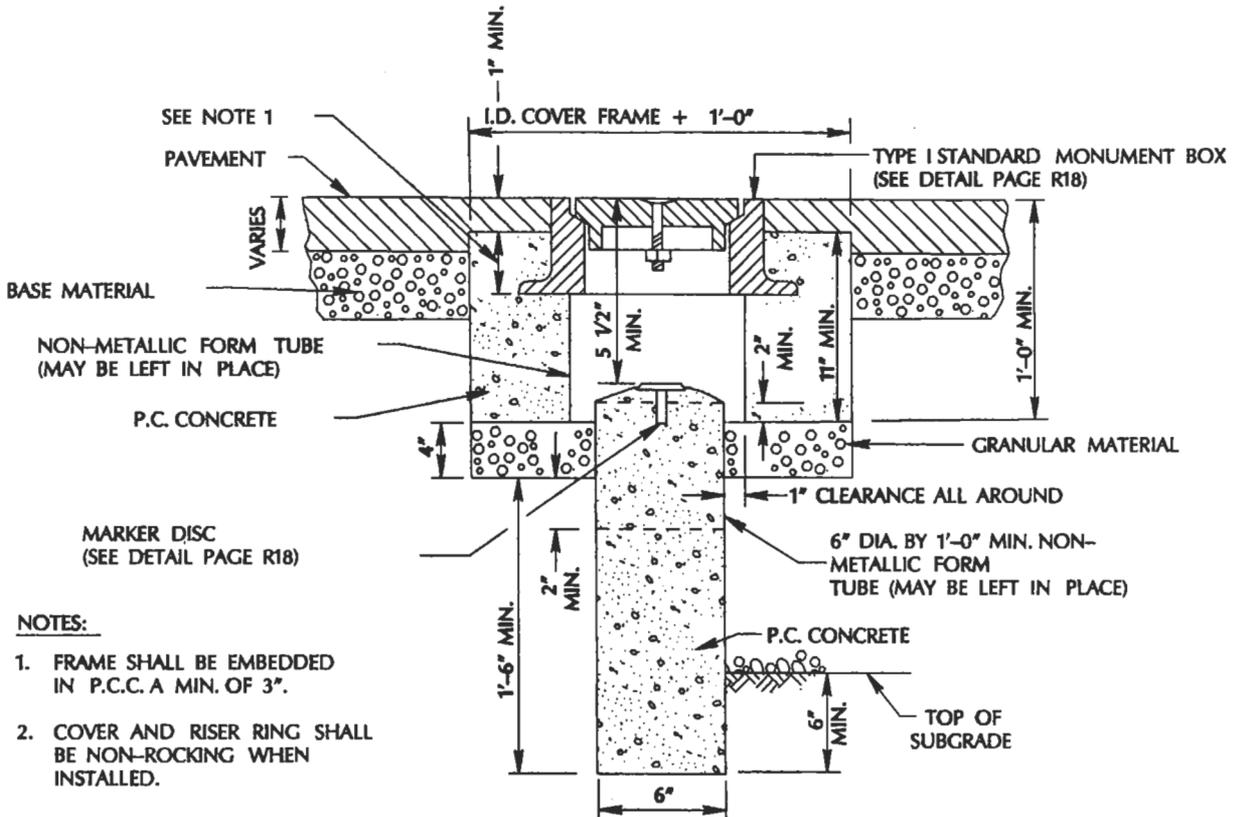
MONUMENT BOX
FRAME SHALL BE
FLUSH WITH
SURROUNDING PAVEMENT



COVER INSTALLATION
PLAN VIEW



SECTION A-A
STANDARD MONUMENT, RESURFACE
WITH EXISTING ROUND BOX



NOTES:

1. FRAME SHALL BE EMBEDDED IN P.C.C. A MIN. OF 3".
2. COVER AND RISER RING SHALL BE NON-ROCKING WHEN INSTALLED.

SECTION A
STANDARD MONUMENT INITIAL INSTALLATION

APPROVED BY

J D m

DATE

4/10/92

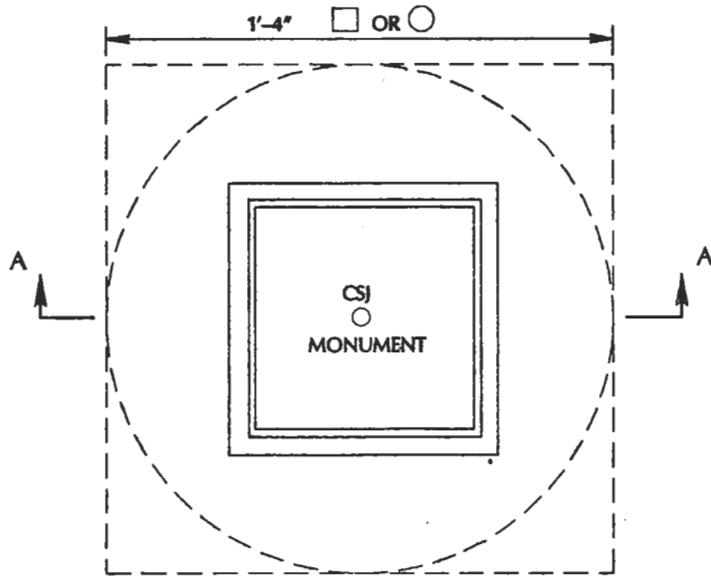
STANDARD CITY MONUMENT

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

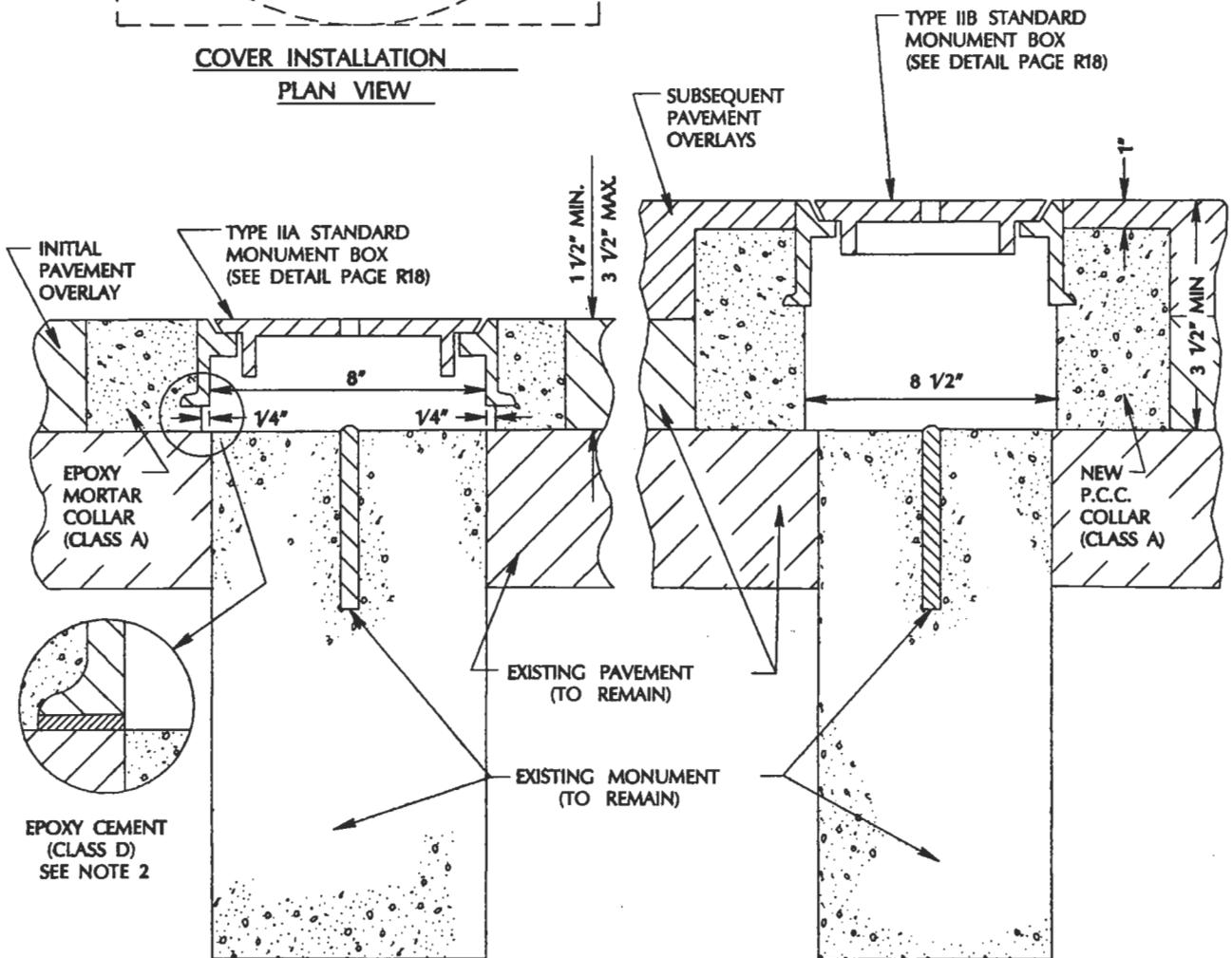
R-16



**COVER INSTALLATION
PLAN VIEW**

NOTES:

1. TYPE IIB BOX SHALL BE USED FOR OVERLAYS OVER 3 1/2" ABOVE INITIAL ROADWAY SURFACE.
2. IF OVERLAY IS 1 1/2" TO 1 3/4" THEN EPOXY CEMENT SHALL BE USED TO SECURE THE BOX TO THE PAVEMENT SURFACE.



**SECTION A-A
INITIAL OVERLAY**

**SECTION A-A
SUBSEQUENT OVERLAYS**

APPROVED BY
JDM

DATE
4/10/92

**TYPE II STANDARD MONUMENT BOX
INSTALLATION/ADJUSTMENT DETAIL**

DEPARTMENT OF PUBLIC WORKS

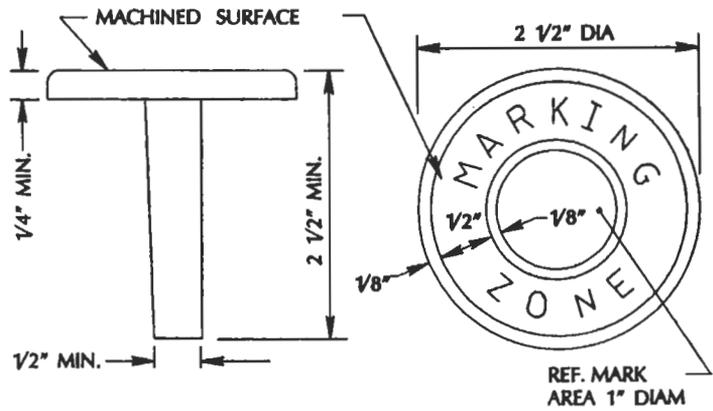


DRAWING NO.

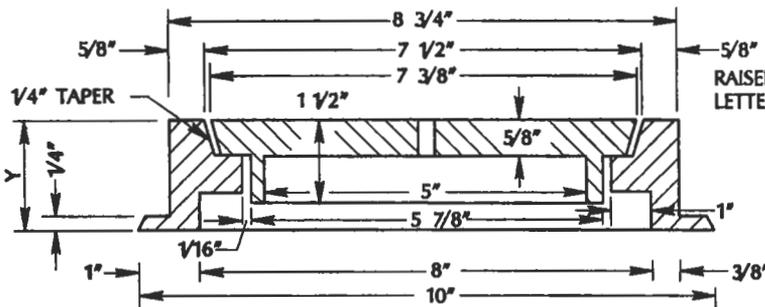
R-17

NOTES:

1. MARKINGS IN ACCORDANCE WITH THE U.S. ACT SHALL BE A MINIMUM OF 3/16" SIZED LETTERS AND NUMBERS LEGIBLY STAMPED WITHIN THE DESIGNATED "MARKING ZONE".
2. REFERENCE MARK SHALL BE PLACED WITHIN A 1" DIAMETER OF THE CENTER OF DISC.
3. SHANK SHALL BE CONSTRUCTED IN A MANNER WHICH PREVENTS REMOVAL OR TURNING ONCE SET IN CONCRETE.

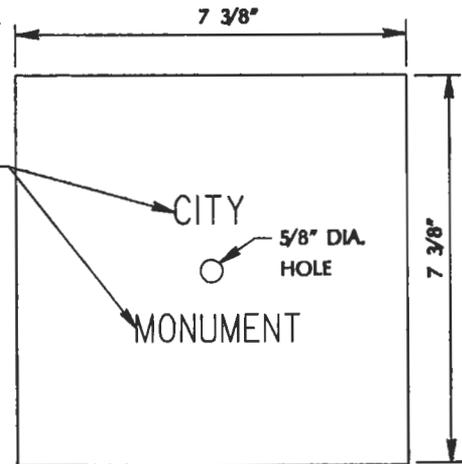


BRASS MARKER DISC



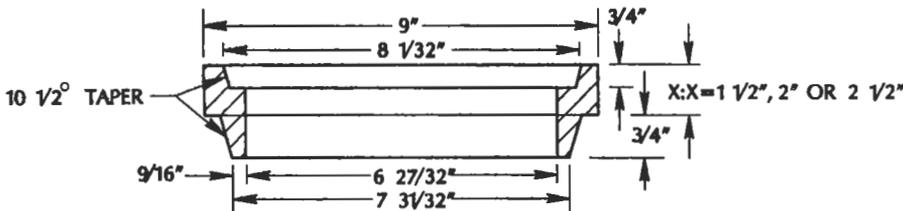
TYPE IIA - Y = 1 1/2"
TYPE IIB - Y = 3"

SECTION-FRAME AND COVER

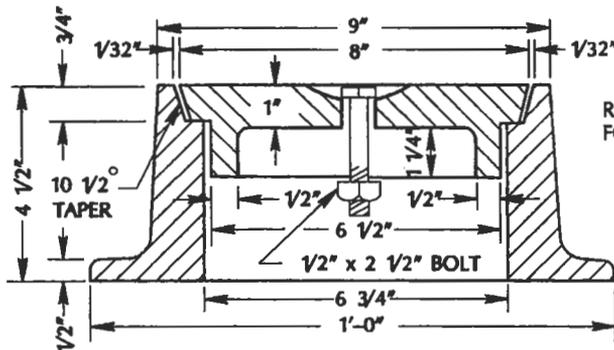


COVER DETAIL

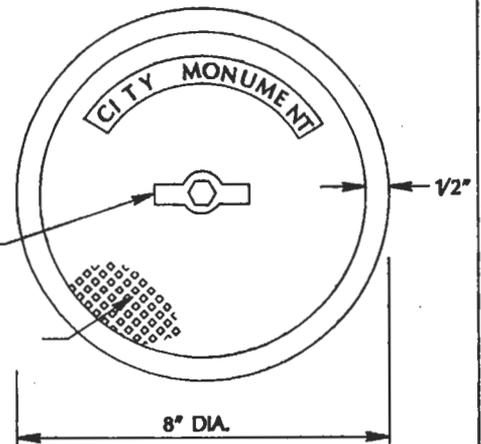
TYPE II MONUMENT BOX



SECTION-RISER RING



SECTION-FRAME AND COVER



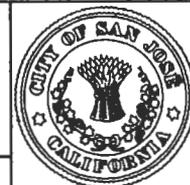
COVER DETAIL

TYPE I MONUMENT BOX

APPROVED BY
J D M
DATE
4/10/92

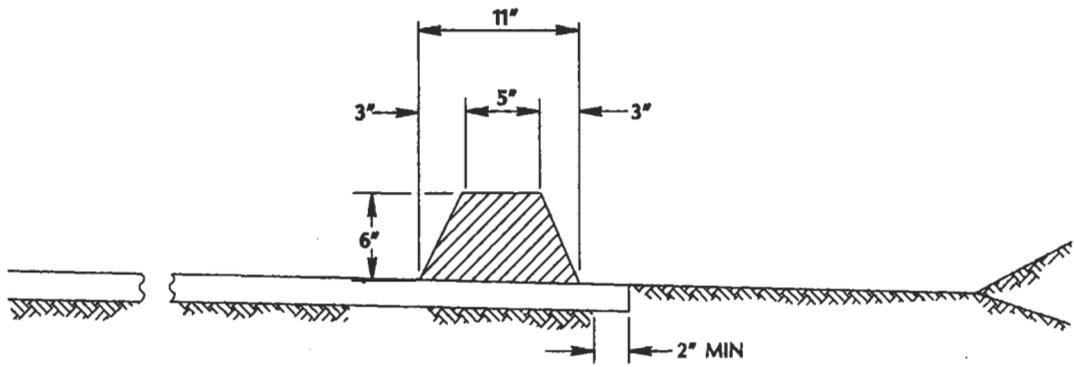
**STANDARD MONUMENT BOXES AND
MARKER DISC CASTING DETAILS**

DEPARTMENT OF PUBLIC WORKS

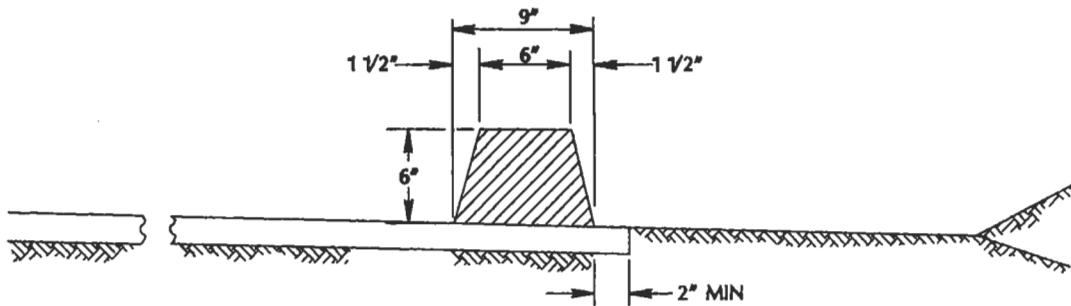


DRAWING NO.

R-18



TYPE A



TYPE B

APPROVED BY

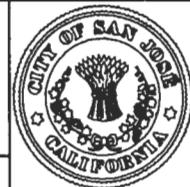
J. D. M.

DATE

4/10/92

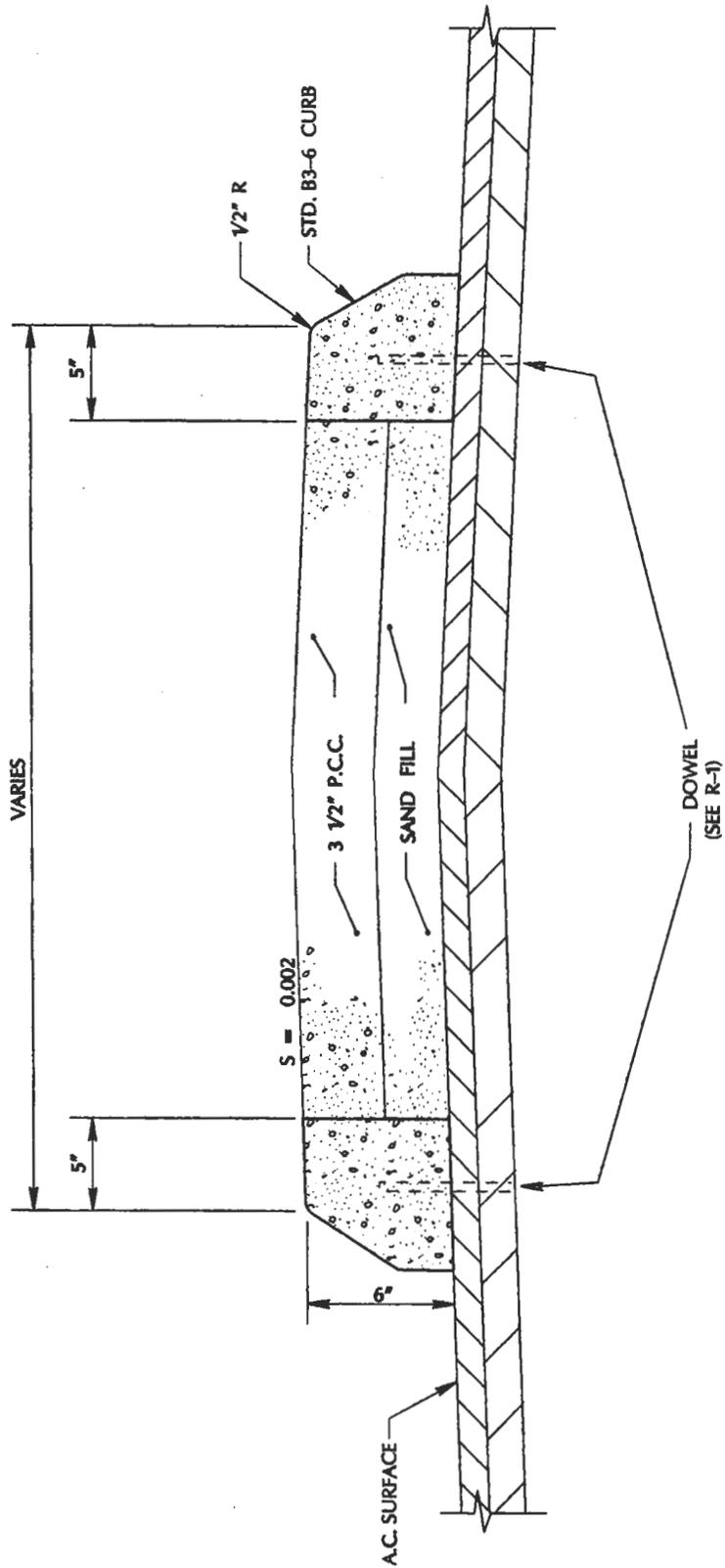
ASPHALT CONCRETE DIKE/BERM

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

R-19



APPROVED BY

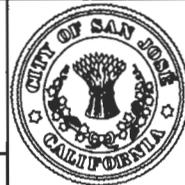
J.D.M.

DATE

4/10/14

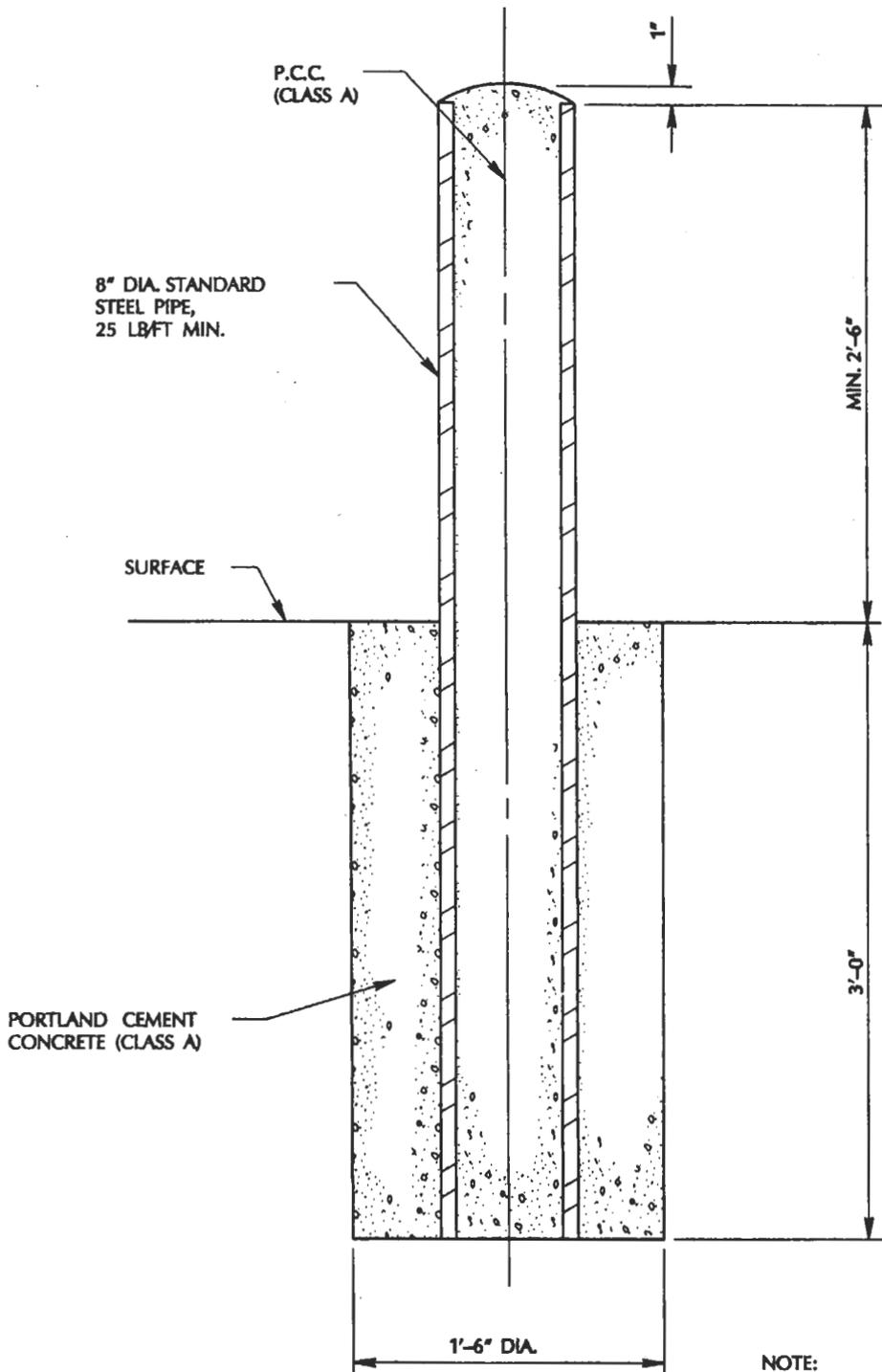
PAVED MEDIAN ISLAND

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

R-20



NOTE:

PAINT SAME AS ADJACENT FACILITY BEING PROTECTED

APPROVED BY

JDM

DATE

4/10/92

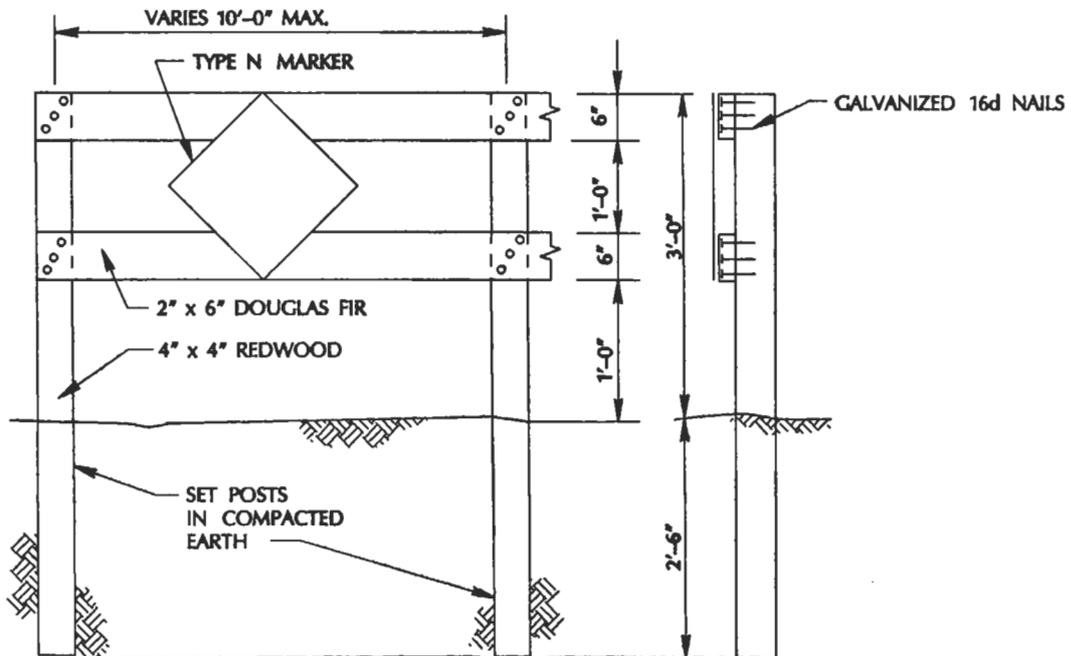
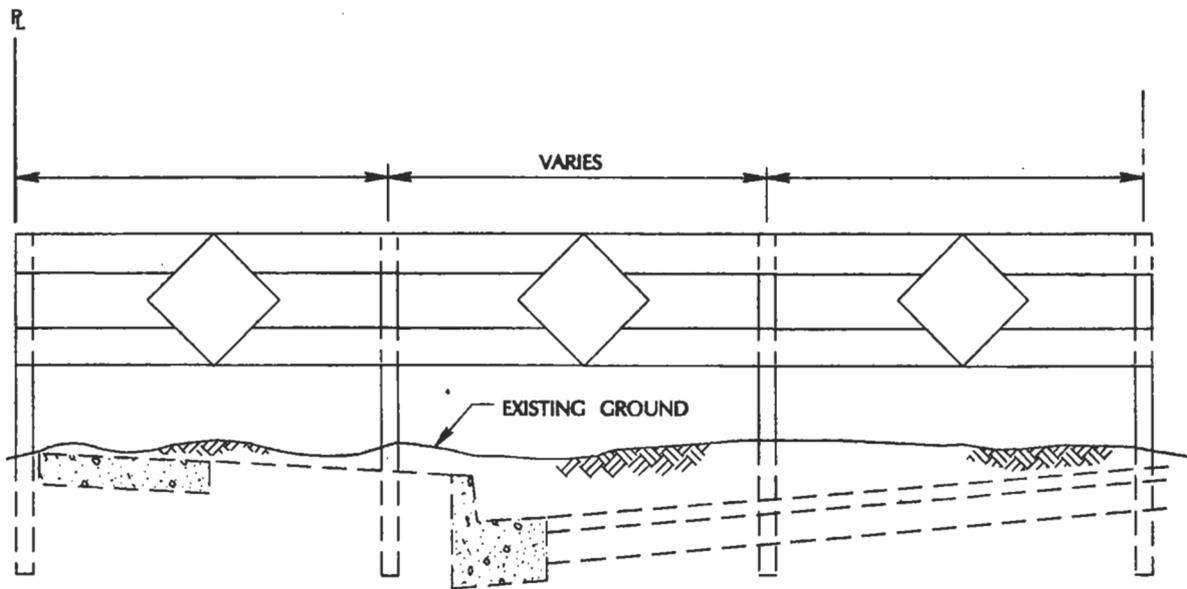
GUARD POST

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

R-22



NOTES:

1. PAINT ALL EXPOSED WOOD SURFACES WITH ONE APPLICATION EXTERIOR WOOD PRIMER AND TWO COATS EXTERIOR WHITE ENAMEL.
2. SECURE EACH JOINT WITH THREE GALVANIZED 16d NAILS.
3. PLACE TYPE N MARKER EACH 10'-0" SECTION AS SHOWN.
4. RAILS TO BE CONSTRUCTION GRADE DOUGLAS FIR S4S 2" x 6", POSTS TO BE CONSTRUCTION GRADE REDWOOD S4S 4" x 4".

APPROVED BY

J. D. M.

DATE

4/17/92

TYPE IV BARRICADE

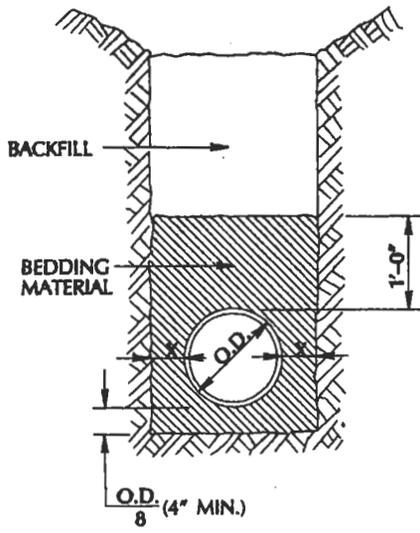
DEPARTMENT OF PUBLIC WORKS



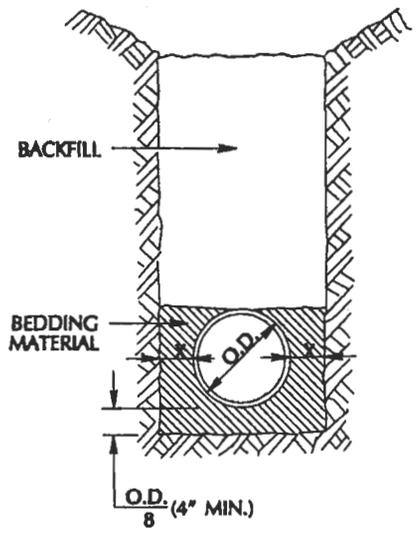
DRAWING NO.

R-23

SEWER/DRAINAGE STRUCTURES

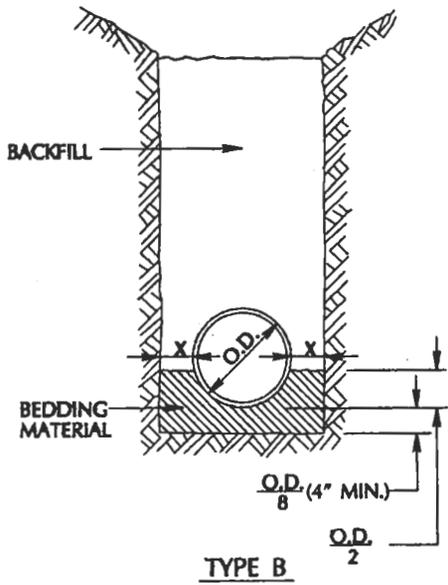


TYPE A

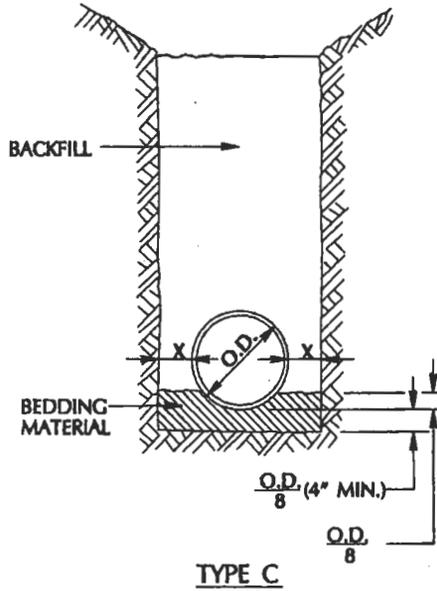


TYPE AO

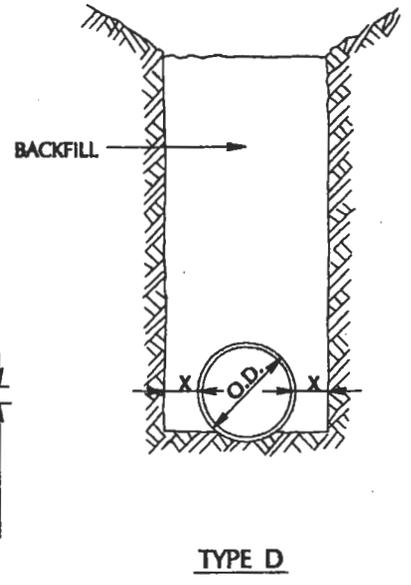
PIPE SIZE	LIMITS OF X	
	MINIMUM	MAXIMUM
24" OR LESS	4"	4" + $\frac{O.D.}{4}$
27" AND GREATER	6"	6" + $\frac{O.D.}{4}$



TYPE B



TYPE C



TYPE D

APPROVED BY
WIKD

DATE
4/1/72

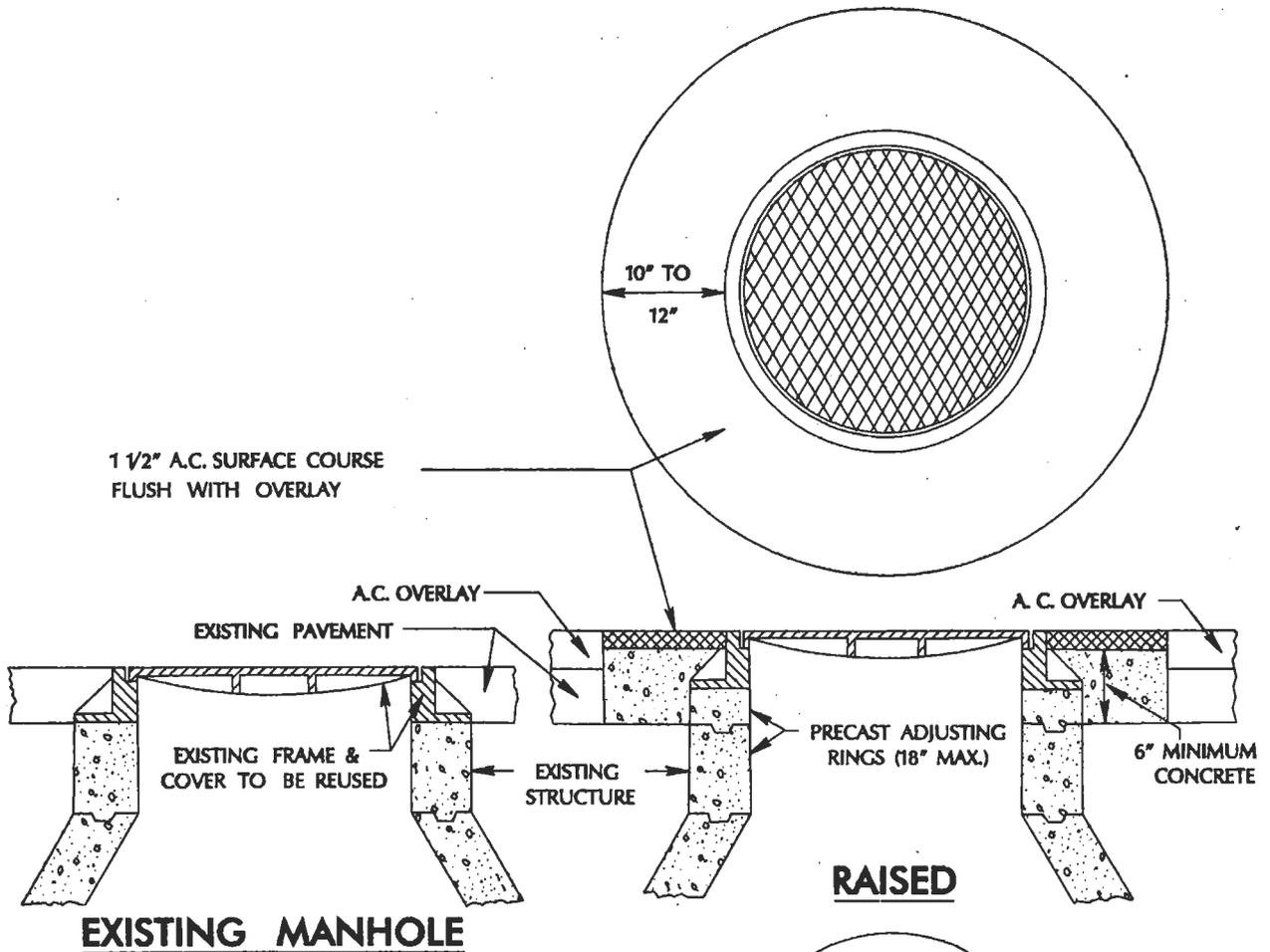
PIPE BEDDING - TYPES

DEPARTMENT OF PUBLIC WORKS

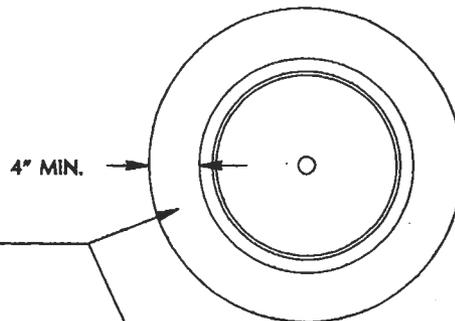


DRAWING NO.

D-1



EXISTING MANHOLE



EXISTING VALVE

RAISED

APPROVED BY

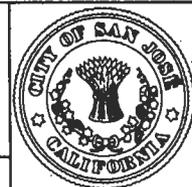
M.R.D.

DATE

4/1/92

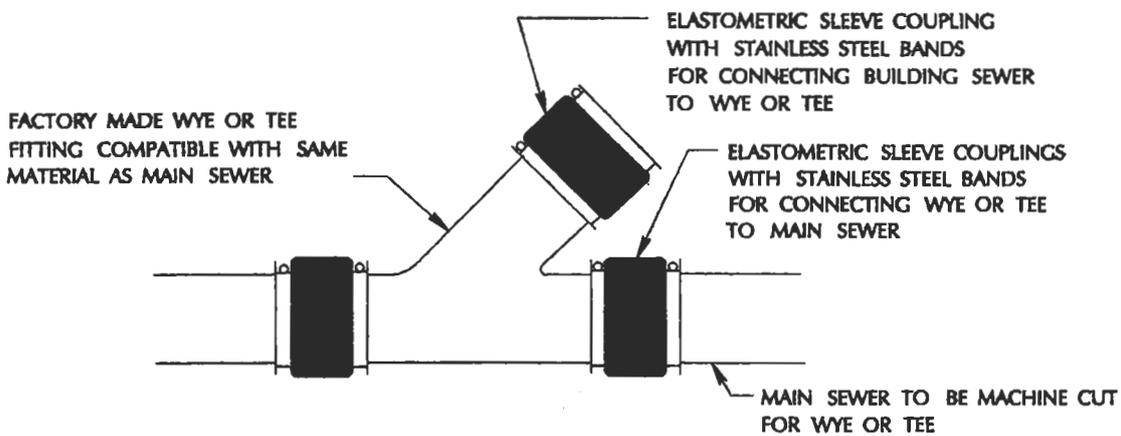
**MANHOLE / VALVE CASTING
ADJUSTMENT DETAIL**

DEPARTMENT OF PUBLIC WORKS

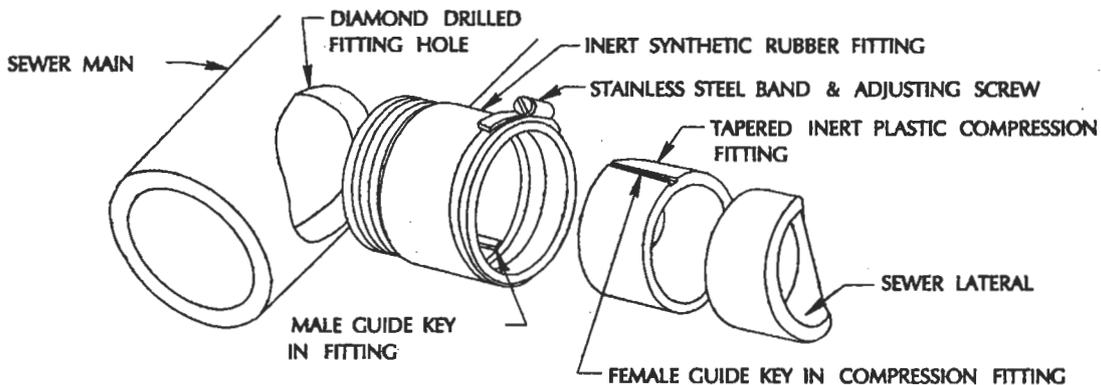


DRAWING NO.

D-2

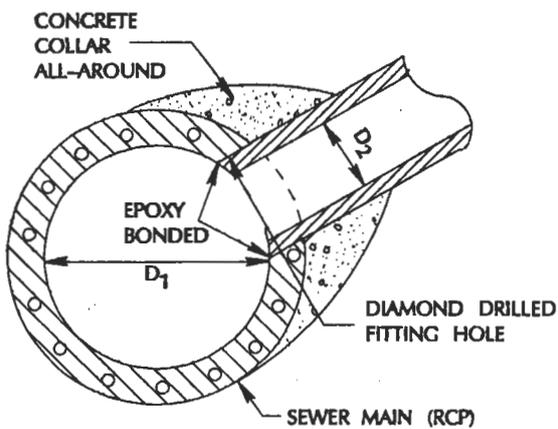


INSERTION OF FACTORY MADE WYE OR TEE



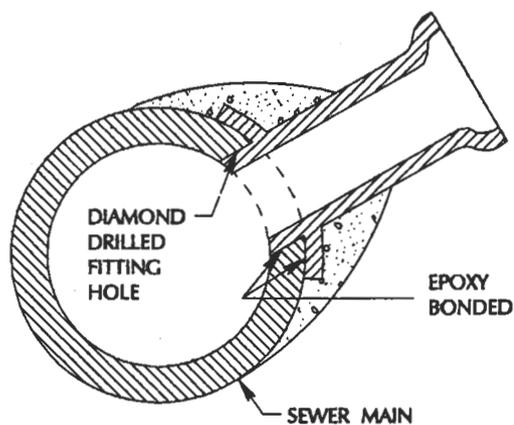
SYNTHETIC RUBBER WEDGED INSERT TEE

(MIN. DIFFERENTIAL OF TWO SIZES REQUIRED)



TEE TAP (RCP)

$D_1 \geq 2.5 D_2$



TEE SADDLE TAP (VCP)

APPROVED BY

YNY

DATE

4/1/92

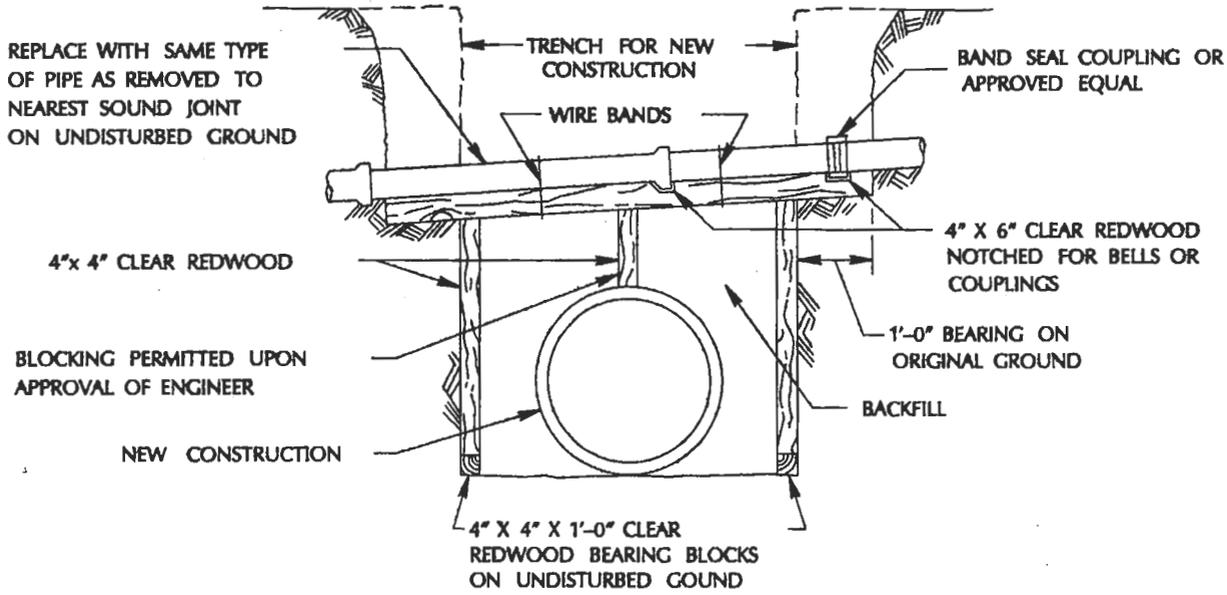
**SIDE SEWER/LATERAL
FITTINGS TO EXISTING MAINS**

DEPARTMENT OF PUBLIC WORKS

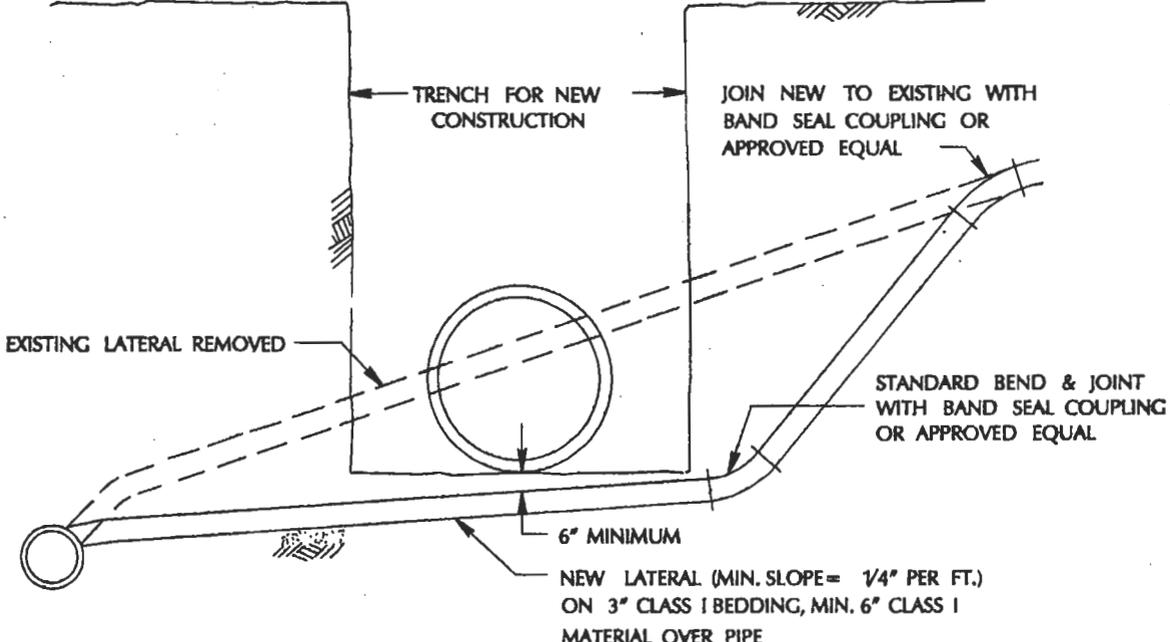


DRAWING NO.

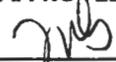
D-3

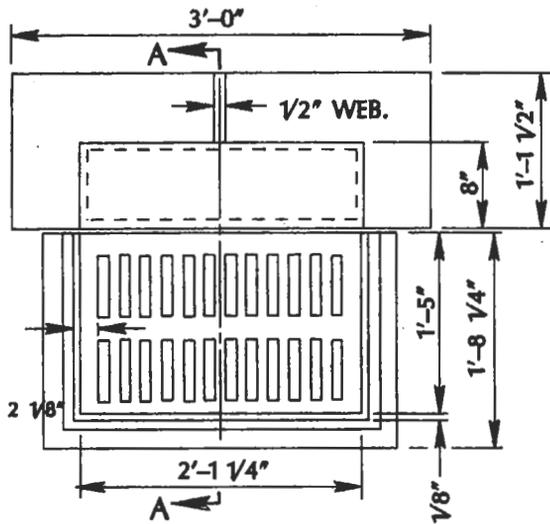


SIDE SEWER LATERAL SUPPORT OVER NEW CONSTRUCTION

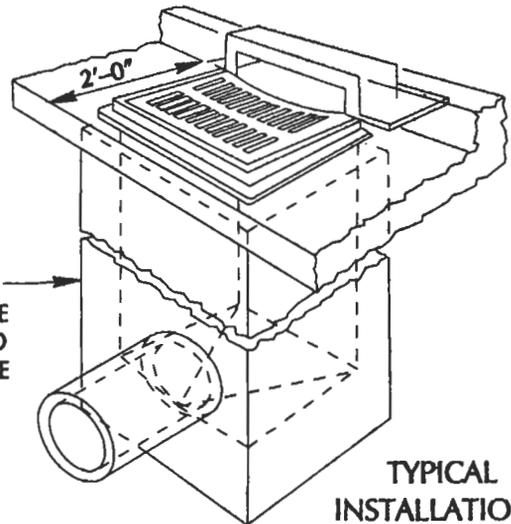


SIDE SEWER LATERAL RELOCATION OPTION UNDER NEW CONSTRUCTION

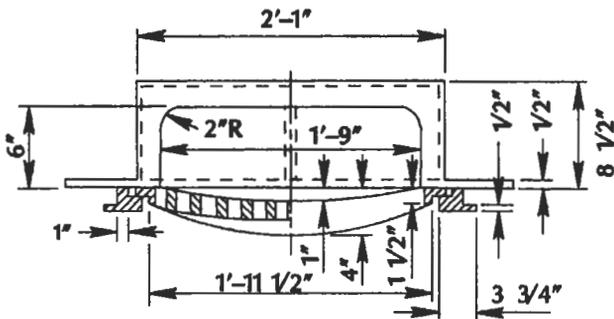
APPROVED BY: 	<p style="text-align: center;">LATERAL SUPPORT & REPLACEMENT</p> <p style="text-align: center;">DEPARTMENT OF PUBLIC WORKS</p>		DRAWING NO. <p style="text-align: center;">D-4</p>
DATE 4/1/92			



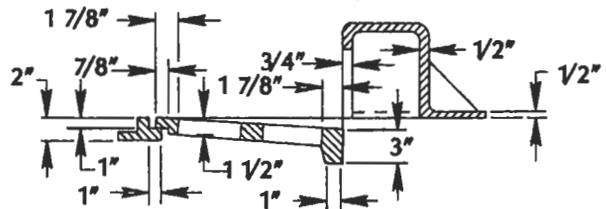
FOR BOX
DETAILS SEE
"STANDARD
FLAT GRATE
INLETS"



TYPICAL
INSTALLATION



REGULAR HOODED INLET



SECTION A-A

APPROVED BY

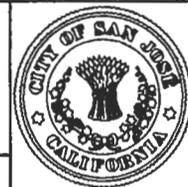
MRT

DATE

4/1/92

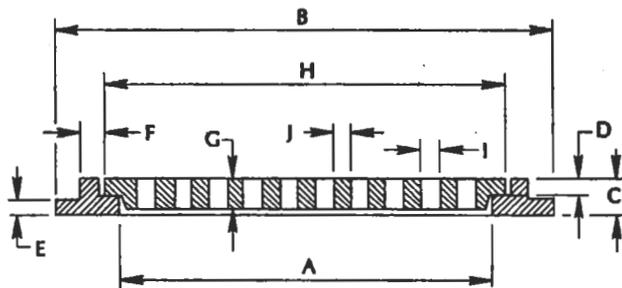
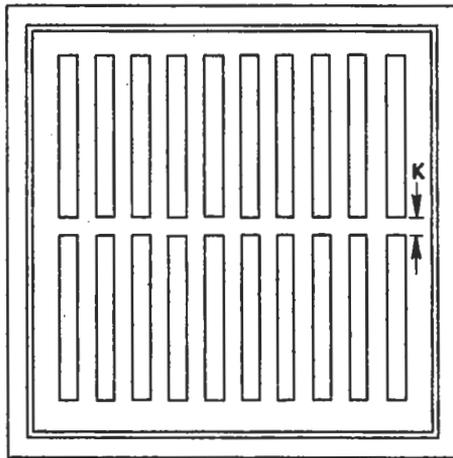
REGULAR HOODED
INLETS

DEPARTMENT OF PUBLIC WORKS



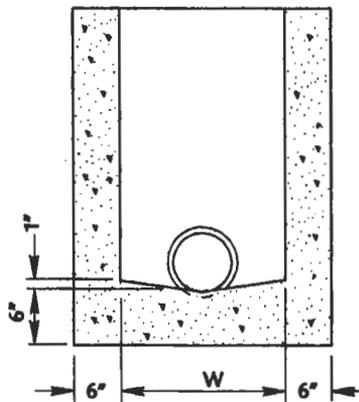
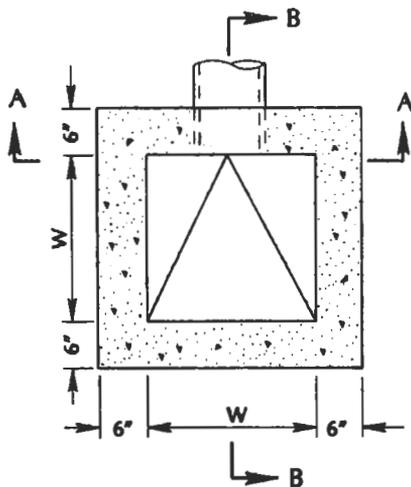
DRAWING
NO.

D-5

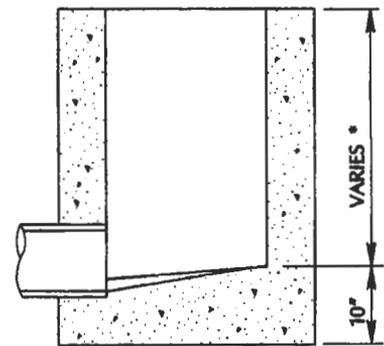


FRAME & GRATE TYPE	A	B	C	D	E	F	G	H	I	J	K	NO. OF RIBS	FLOW AREA
REGULAR FLAT GRATE INLET	24"	30"	2"	1"	1"	3/4"	2"	26"	1"	1"	1 1/4"	10	223 SQ.IN.
LARGE FLAT GRATE INLET	36"	42"	3"	1"	1"	3/4"	2 1/2"	38"	1"	1 1/4"	1 1/2"	15	490 SQ.IN.

GRATE & FRAME



SECTION A-A



* 3'-0" TO 3'-6"

SECTION B-B

FRAME & COVER TYPE	W
REGULAR FLAT GRATE AND HOODED INLETS	24"
LARGE FLAT GRATE AND HOODED INLETS	36"

CONCRETE BOX

APPROVED BY

V.R.D.

DATE

4/1/92

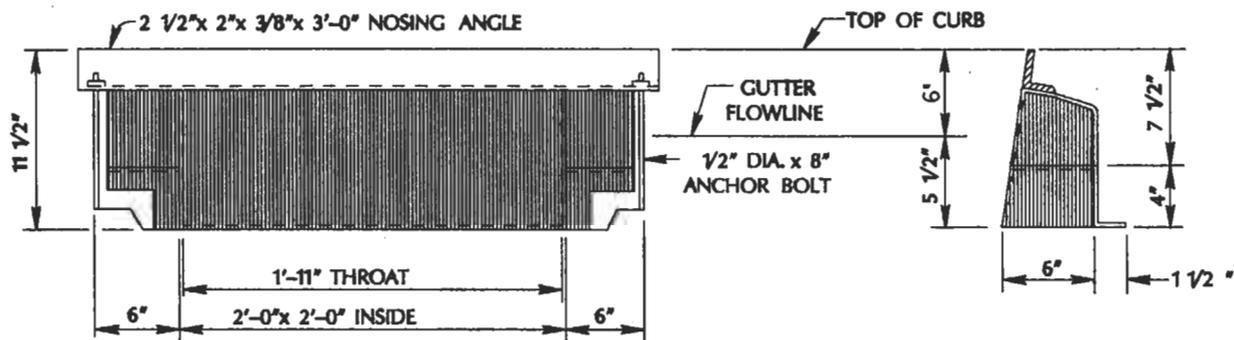
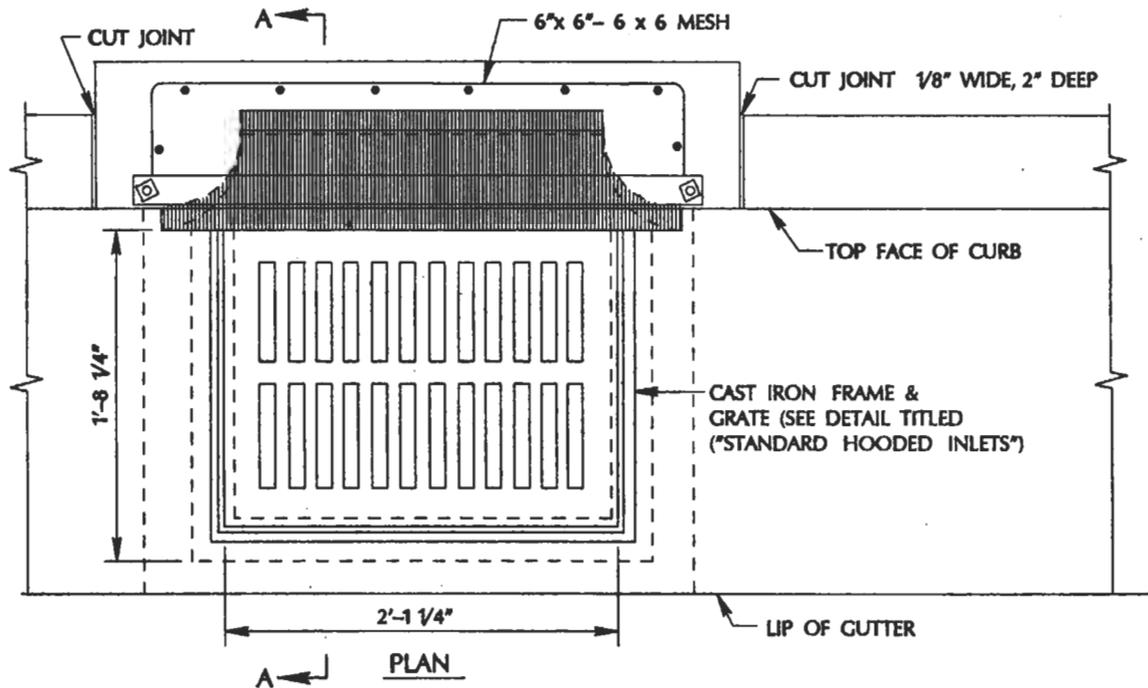
STANDARD FLAT GRATE INLETS

DEPARTMENT OF PUBLIC WORKS



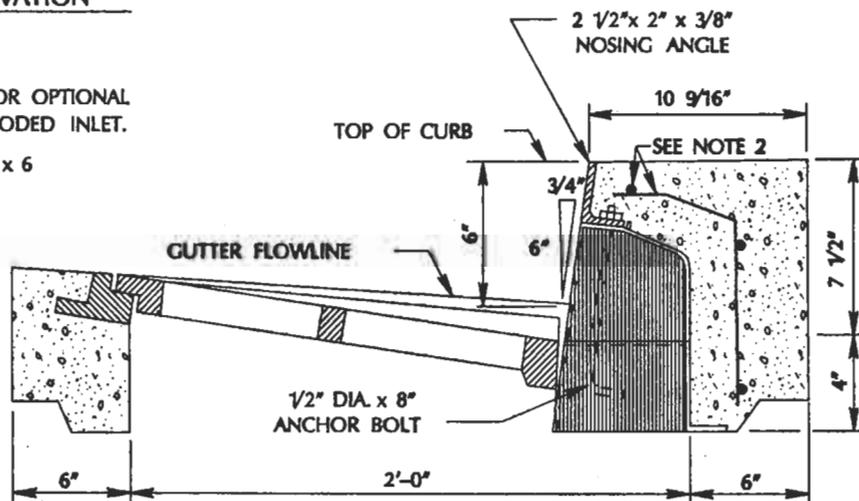
DRAWING NO.

D-6



NOTES:

1. FIBERGLASS LINER ASSEMBLY IS FOR OPTIONAL USE INSTEAD OF STANDARD HOODED INLET.
2. WELDED WIRE MESH 6" x 6" - 6 x 6 IS REINFORCING.
3. FIBERGLASS LINER INDICATED THUS-



APPROVED BY

MRD

DATE

4/1/92

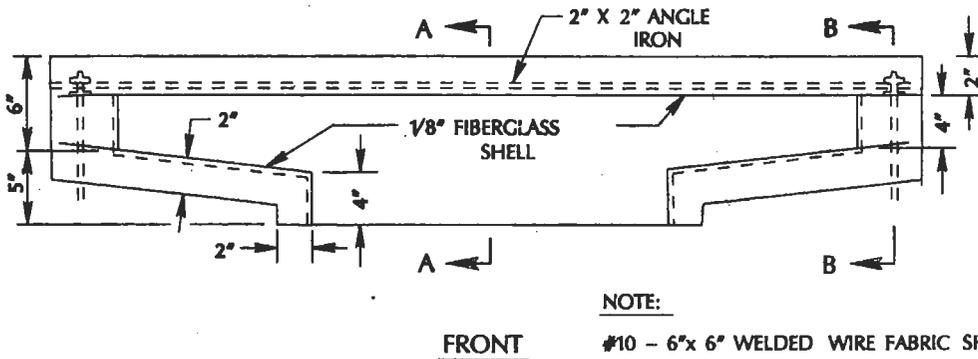
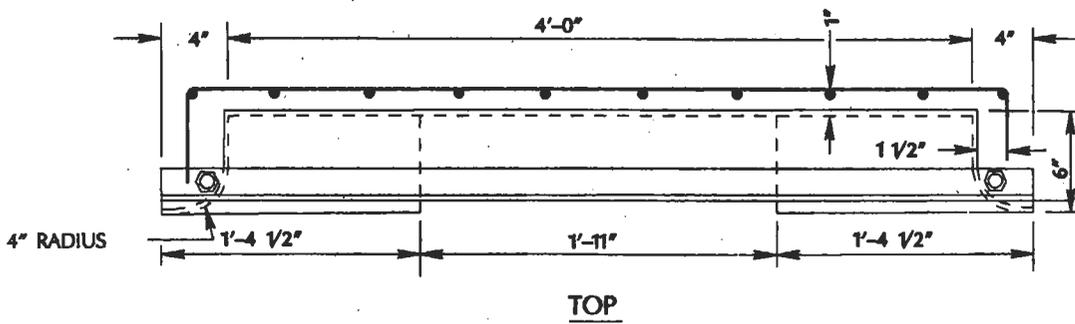
**FIBERGLASS LINER ASSEMBLY
OPTIONAL STANDARD INLET HOOD**

DEPARTMENT OF PUBLIC WORKS

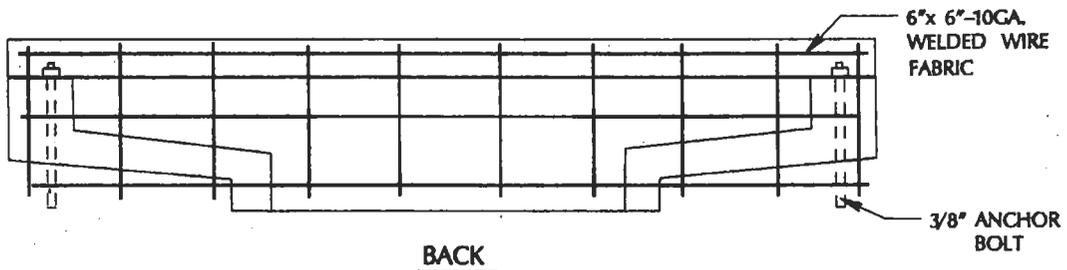
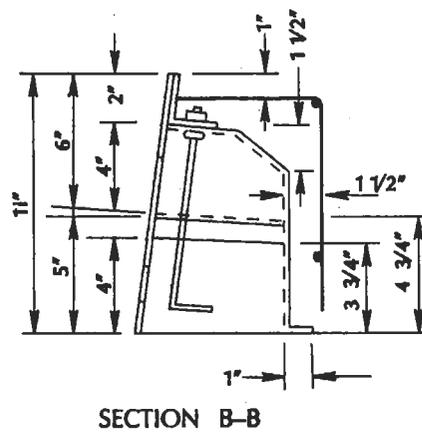
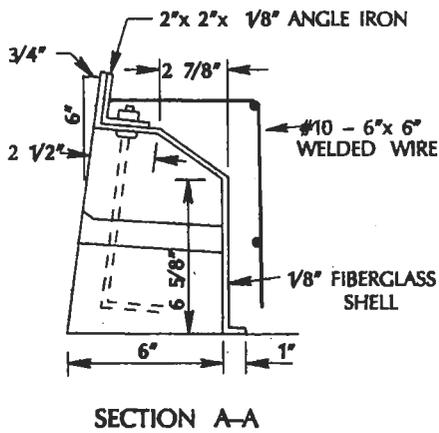


DRAWING NO.

D-7



NOTE:
 #10 - 6"x 6" WELDED WIRE FABRIC SHALL BE SECURELY ATTACHED AT 6" INTERVALS TO THE BACK OF THE 2"x 2" ANGLE IRON



APPROVED BY

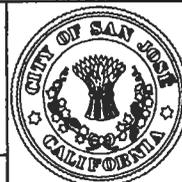
MRD

DATE

4/1/92

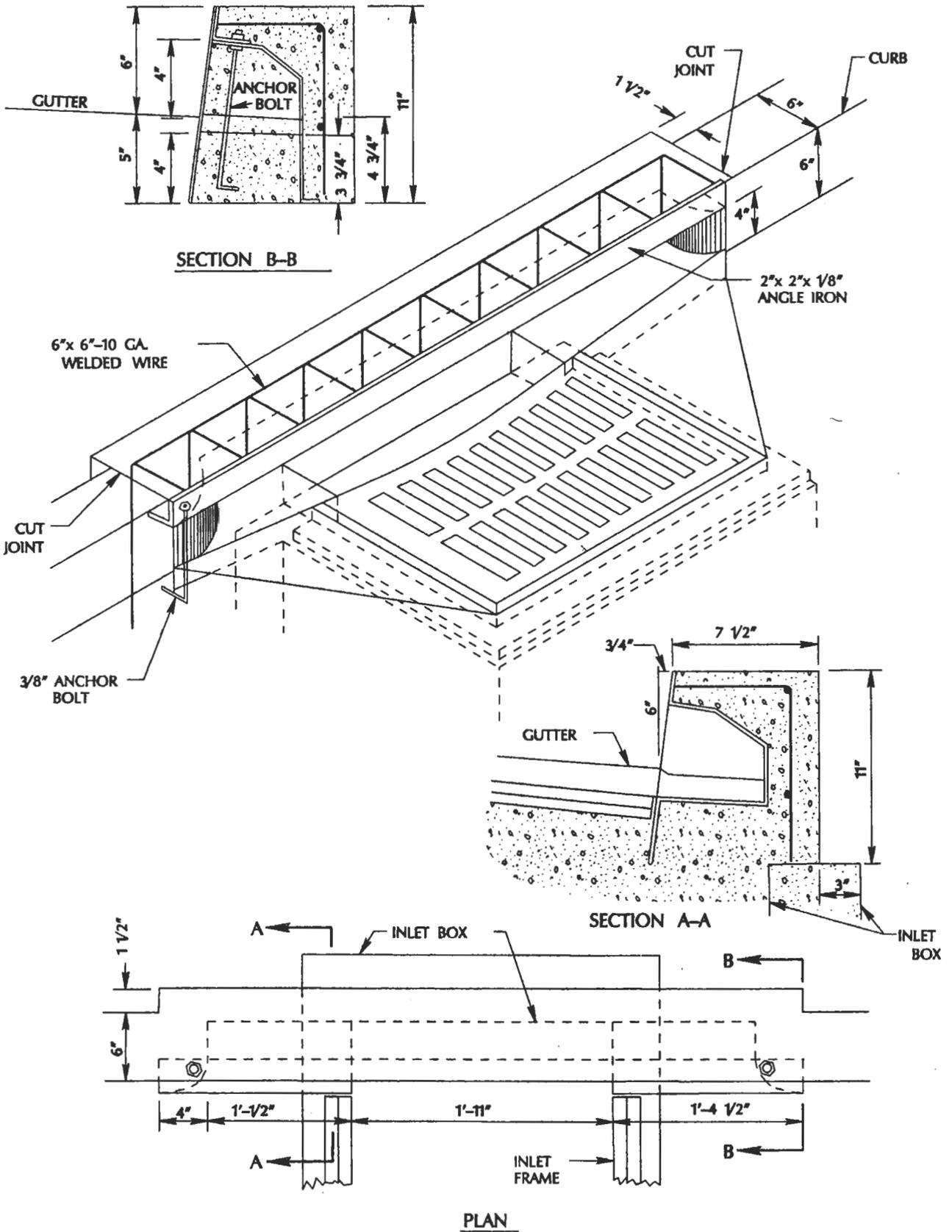
**FABRICATION DETAIL
 FIBERGLASS LINER ASSEMBLY GALLERY**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

D-8



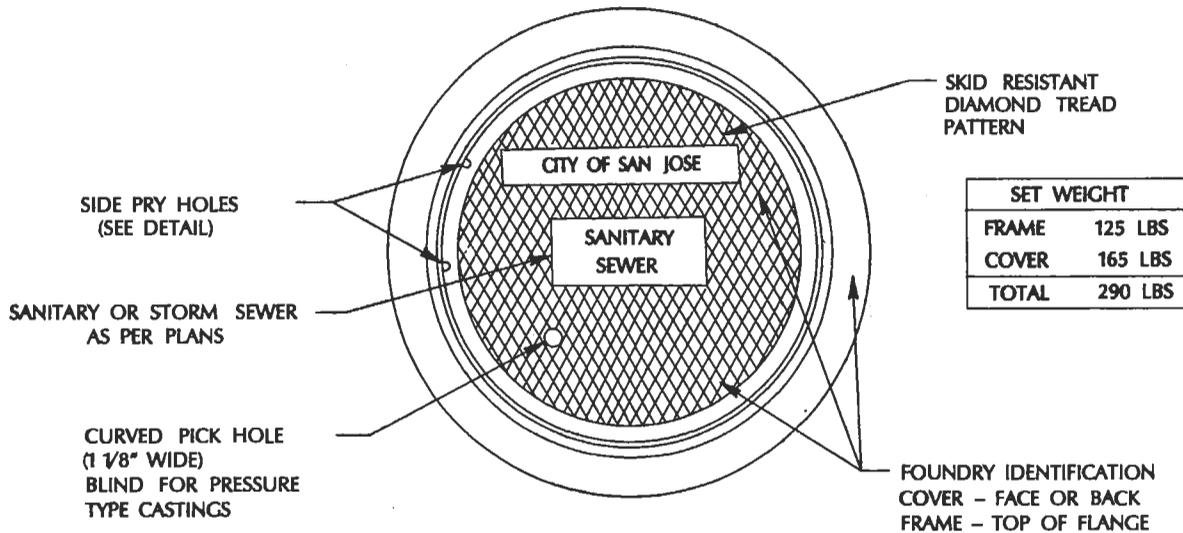
APPROVED BY
WIRD
 DATE
4/1/92

**INSTALLATION DETAIL
 FIBERGLASS LINER ASSEMBLY GALLERY**

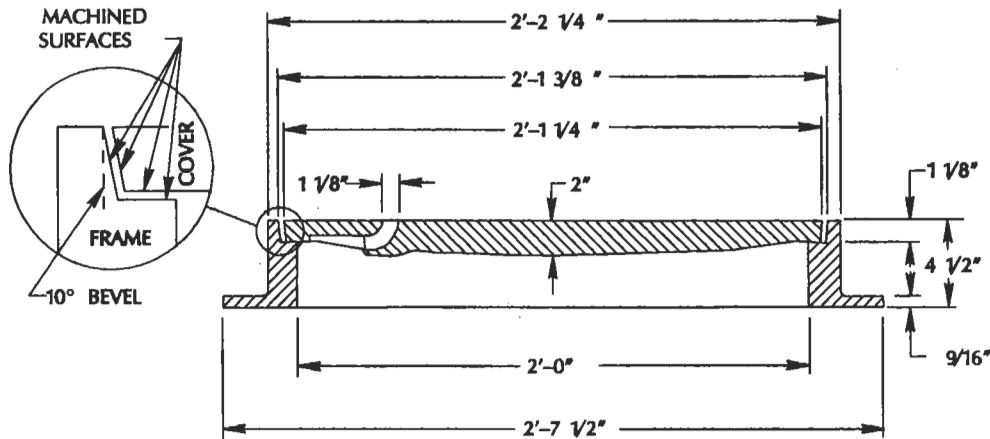
DEPARTMENT OF PUBLIC WORKS



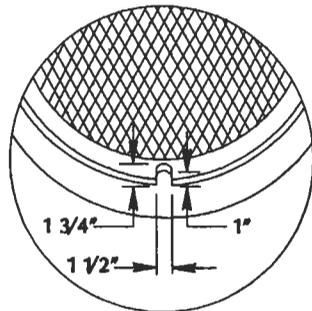
DRAWING NO.
D-9



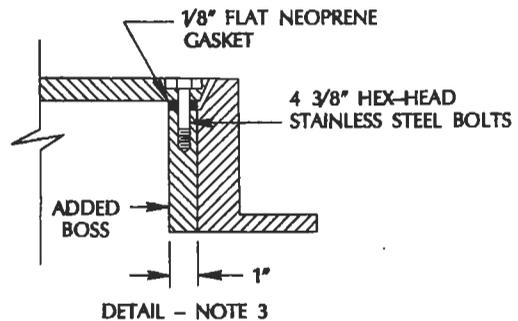
SET WEIGHT	
FRAME	125 LBS
COVER	165 LBS
TOTAL	290 LBS



- NOTES:**
1. MINIMUM WEIGHT OF SET 290 LBS.
 2. CAST IRON SHALL BE ASTM A-48 CLASS 35B.
 3. WHERE BOLT DOWN COVERS ARE CALLED FOR ON THE PLANS, ADD BOSSES TO FRAME (4 EA. @ 90°), SEE DETAIL.
 4. MANUFACTURER SHALL CERTIFY MATERIAL, WEIGHT AND DIMENSIONS.
 5. MANUFACTURER TO CERTIFY THAT FRAME AND COVER MEET ALL LOAD REQUIREMENTS FOR H-20 HIGHWAY LOADING.



DETAIL - SIDE PLY HOLE



DETAIL - NOTE 3

APPROVED BY

MRD

DATE

4/3/92

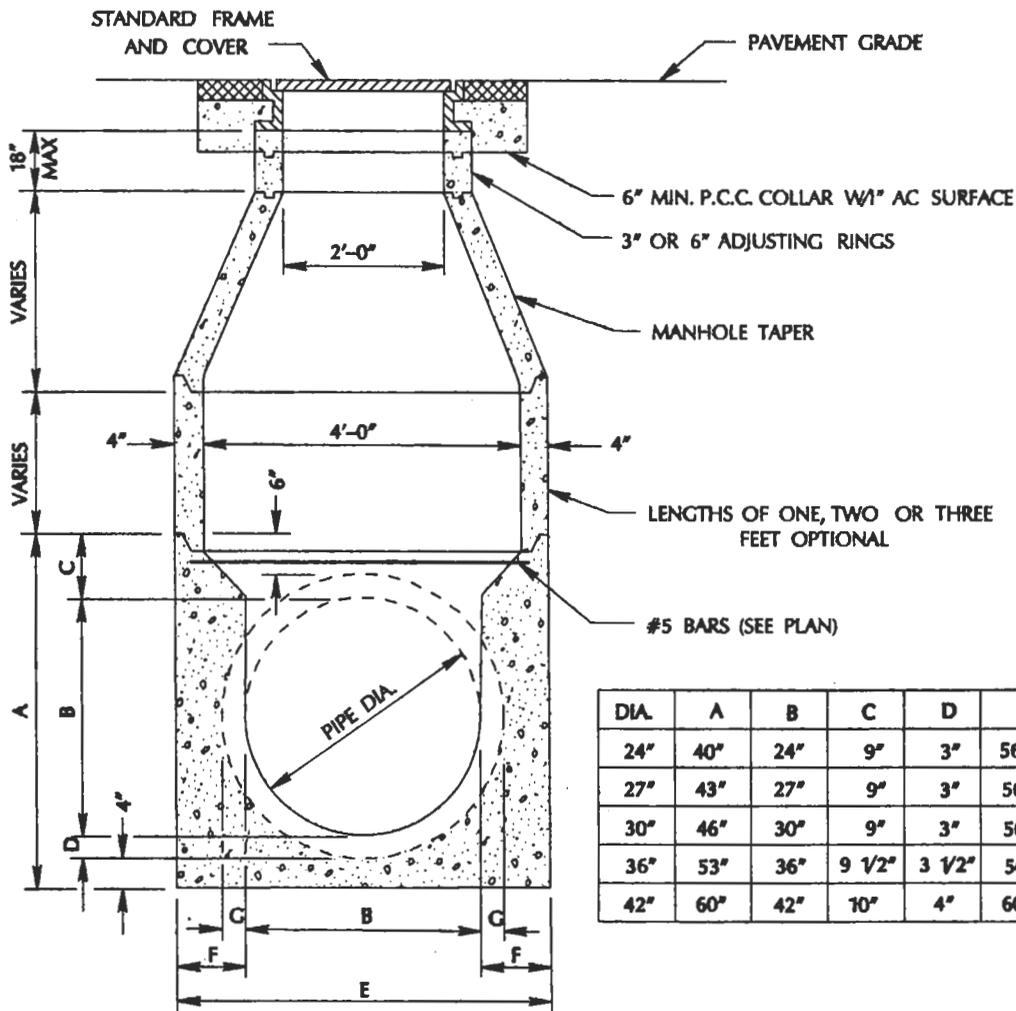
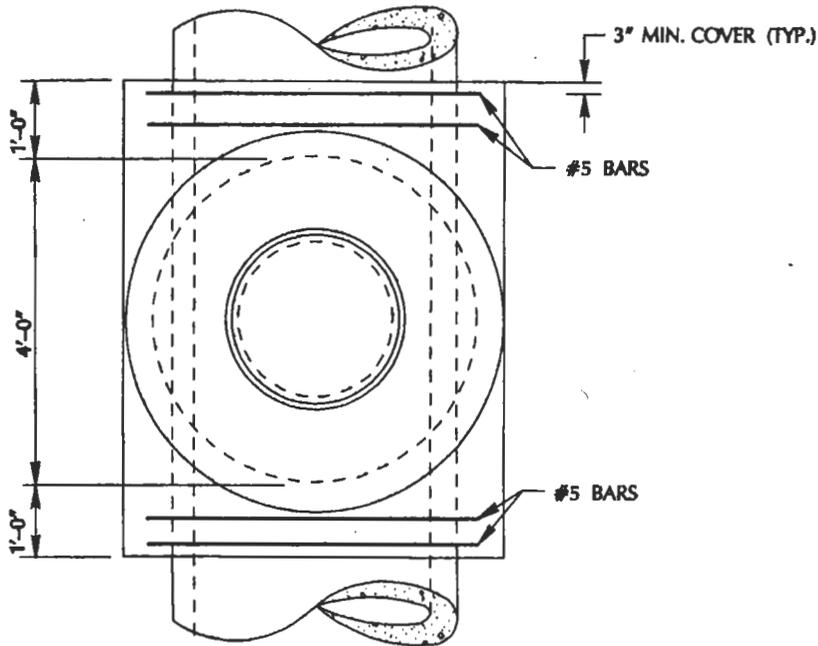
STANDARD MANHOLE FRAME & COVER

DEPARTMENT OF PUBLIC WORKS



DRAWING
NO.

D-10



DIA.	A	B	C	D	E	F	MIN. G
24"	40"	24"	9"	3"	56"	16"	3"
27"	43"	27"	9"	3"	56"	14 1/2"	3"
30"	46"	30"	9"	3"	56"	13"	3"
36"	53"	36"	9 1/2"	3 1/2"	56"	10"	3 1/2"
42"	60"	42"	10"	4"	60"	9"	4"

APPROVED BY

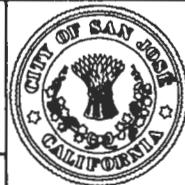
MRD

DATE

4/1/92

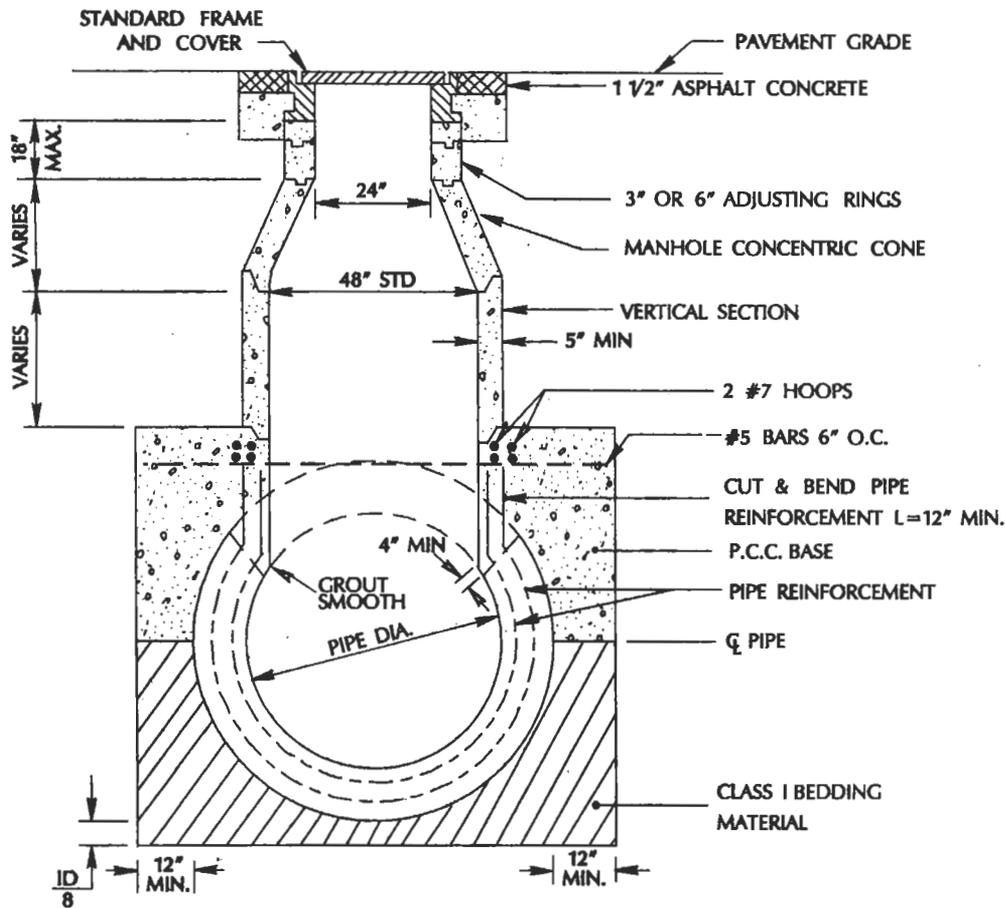
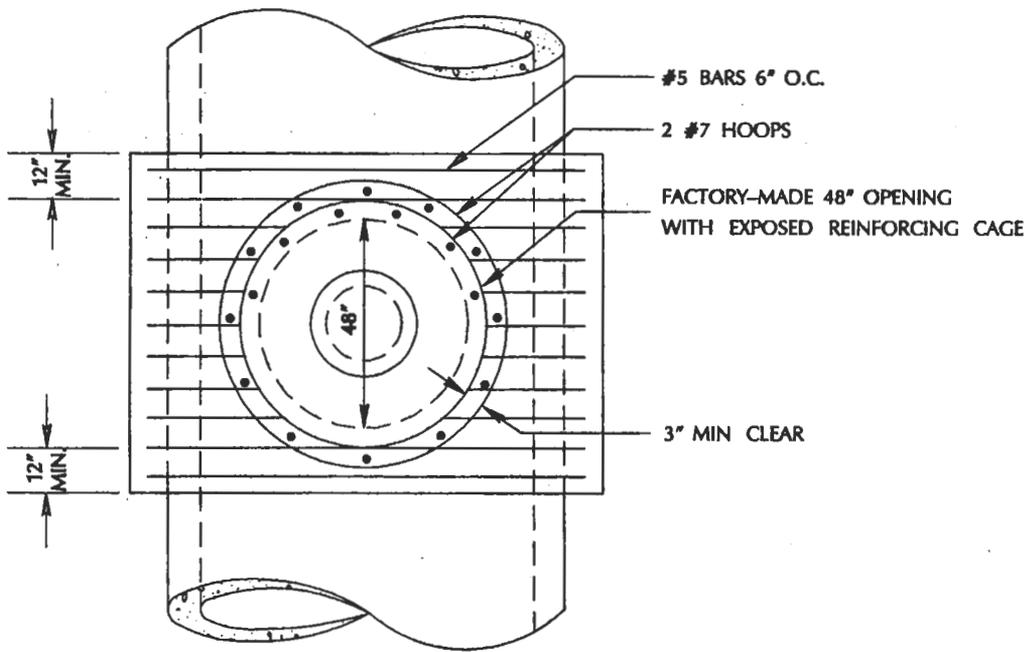
**STANDARD CONCENTRIC MANHOLE,
24" THRU 42" DIAMETER PIPE**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

D-12



APPROVED BY

M.R.D.

DATE

4/1/92

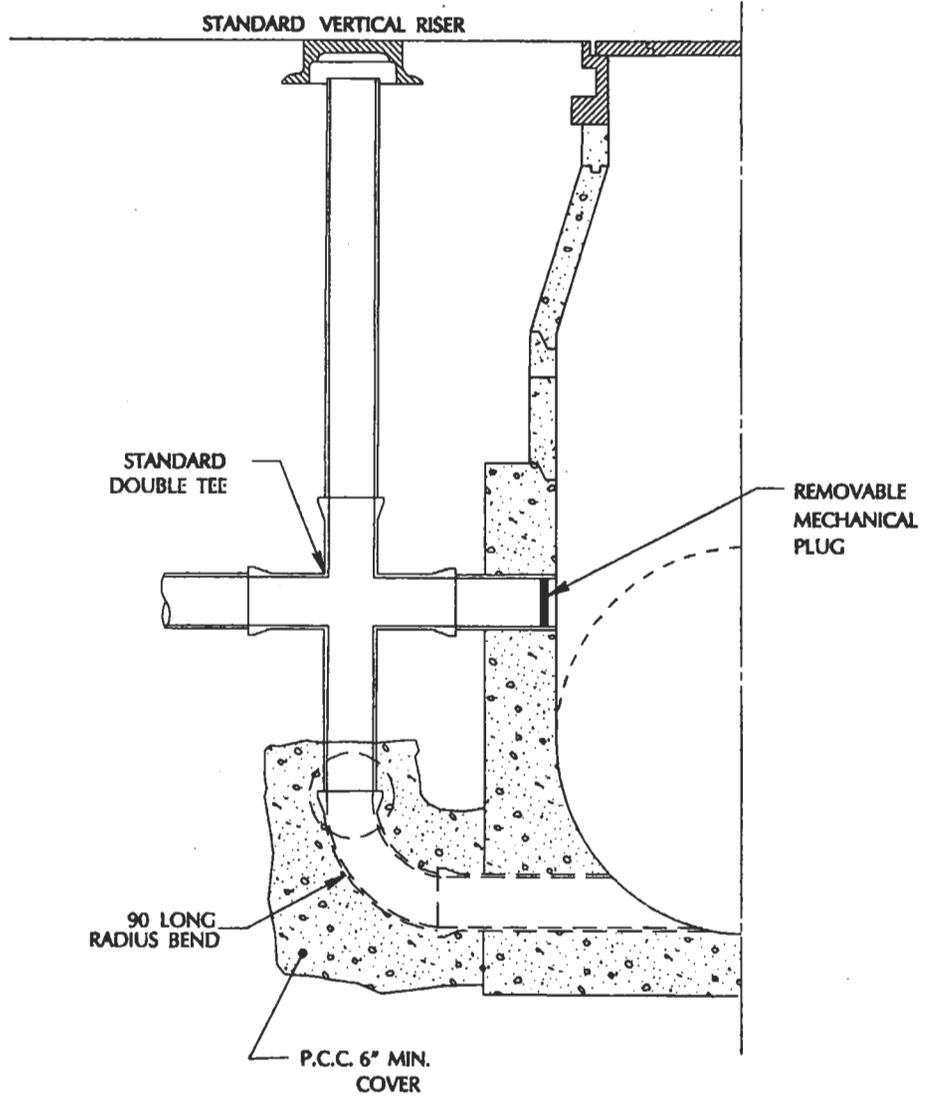
**CONCENTRIC MANHOLE,
 78" DIAMETER & LARGER PIPE**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

D-14



APPROVED BY
[Signature]
 DATE
 4/1/92

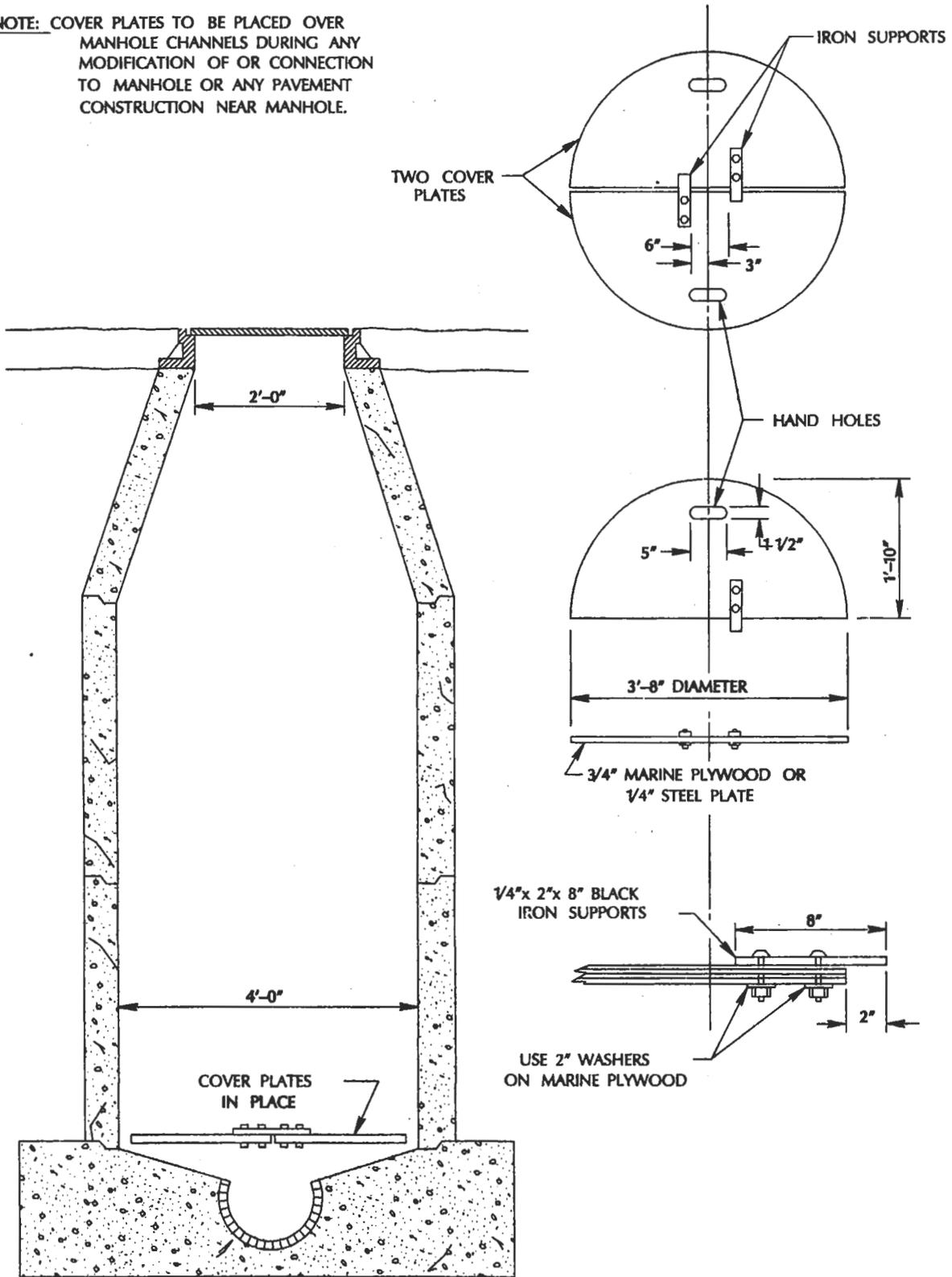
DROP MANHOLE CONNECTION

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
D-15

NOTE: COVER PLATES TO BE PLACED OVER MANHOLE CHANNELS DURING ANY MODIFICATION OF OR CONNECTION TO MANHOLE OR ANY PAVEMENT CONSTRUCTION NEAR MANHOLE.



APPROVED BY

ms

DATE

12-17-91

COVER PLATES FOR MANHOLE CHANNELS

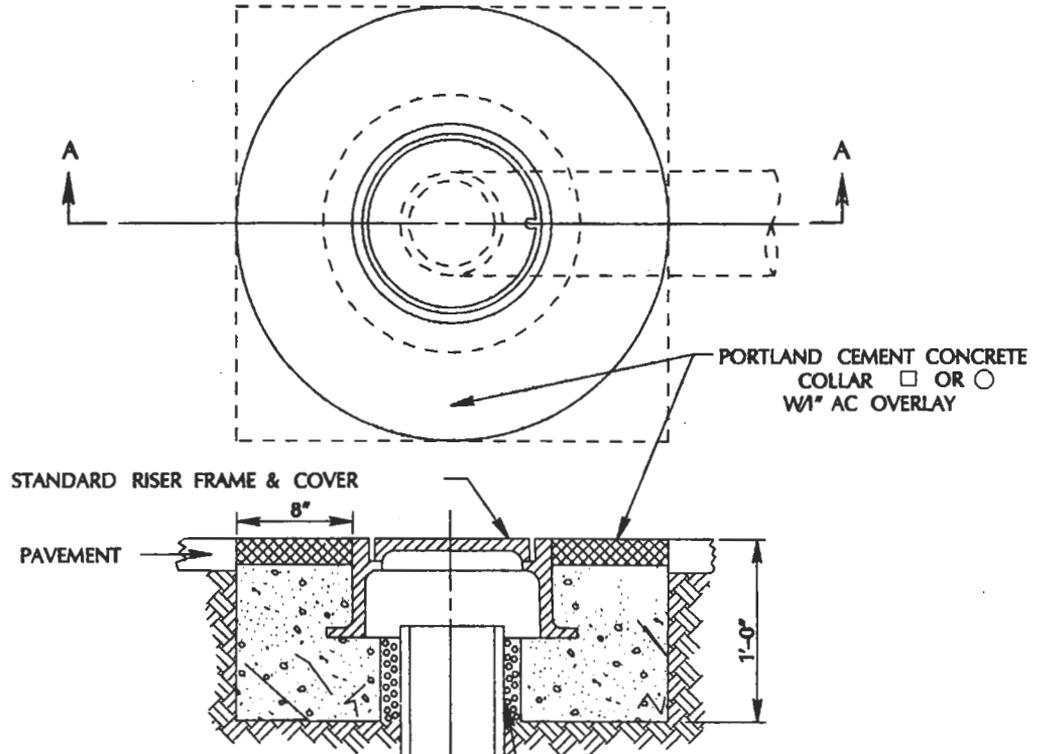
DEPARTMENT OF PUBLIC WORKS



DRAWING
NO.

D-16

TOP VIEW



STANDARD RISER FRAME & COVER

PAVEMENT

8"

PORTLAND CEMENT CONCRETE
COLLAR □ OR ○
W1" AC OVERLAY

1'-0"

RESILIENT MATERIAL

6"
MIN.

6"
MIN.

CONCRETE

6"
MIN.

SECTION A-A

(WITH 90° LONG RADIUS BEND)

APPROVED BY

MU

DATE

2-17-81

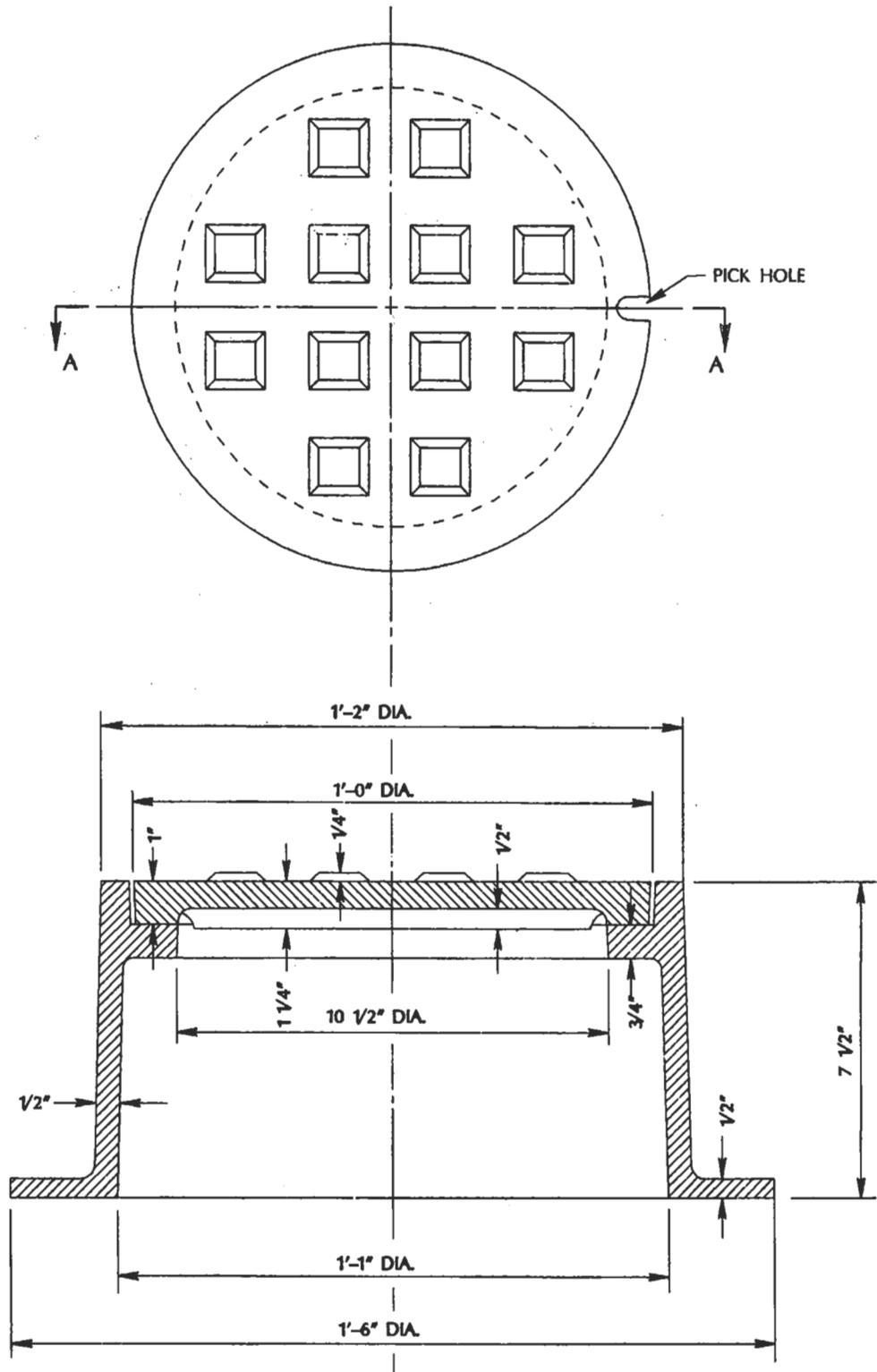
STANDARD VERTICAL RISER

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

D-17

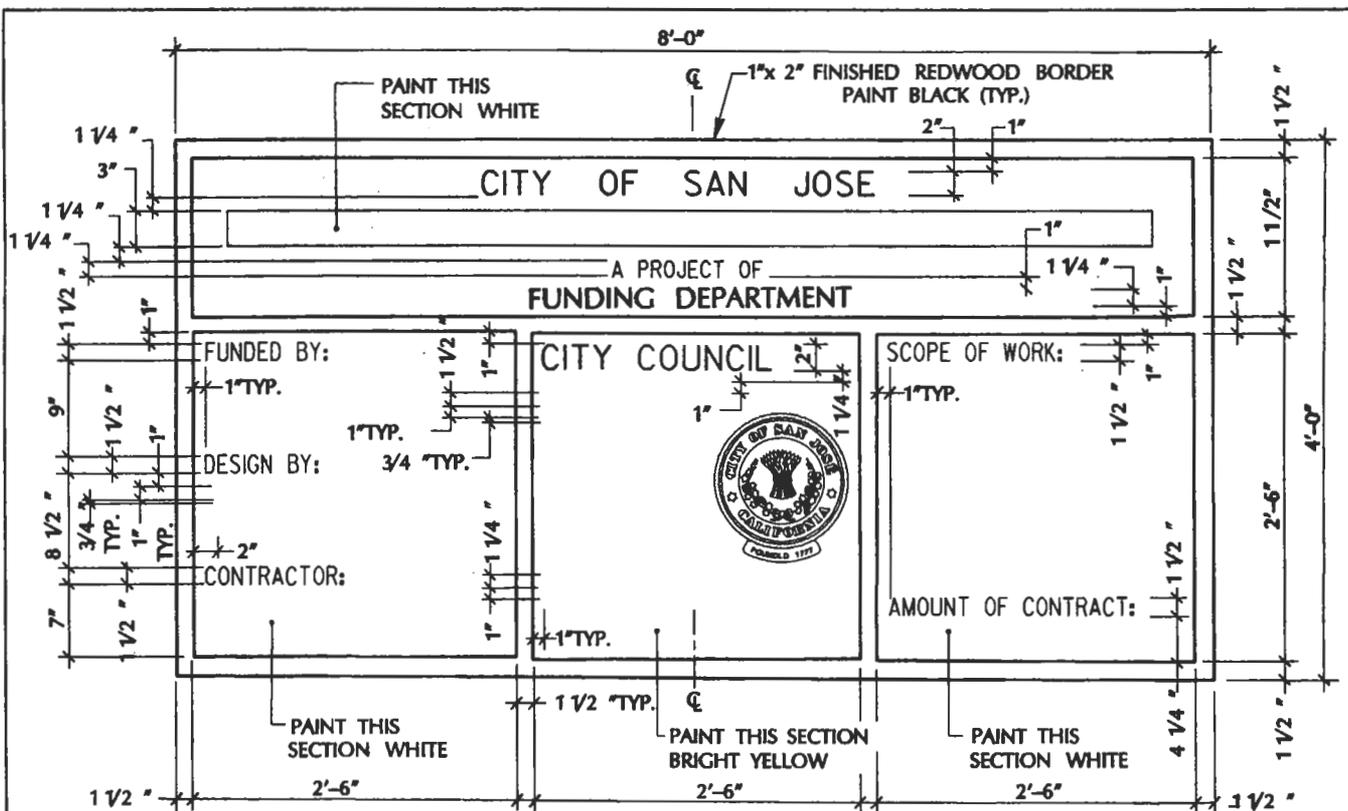


SECTION A-A

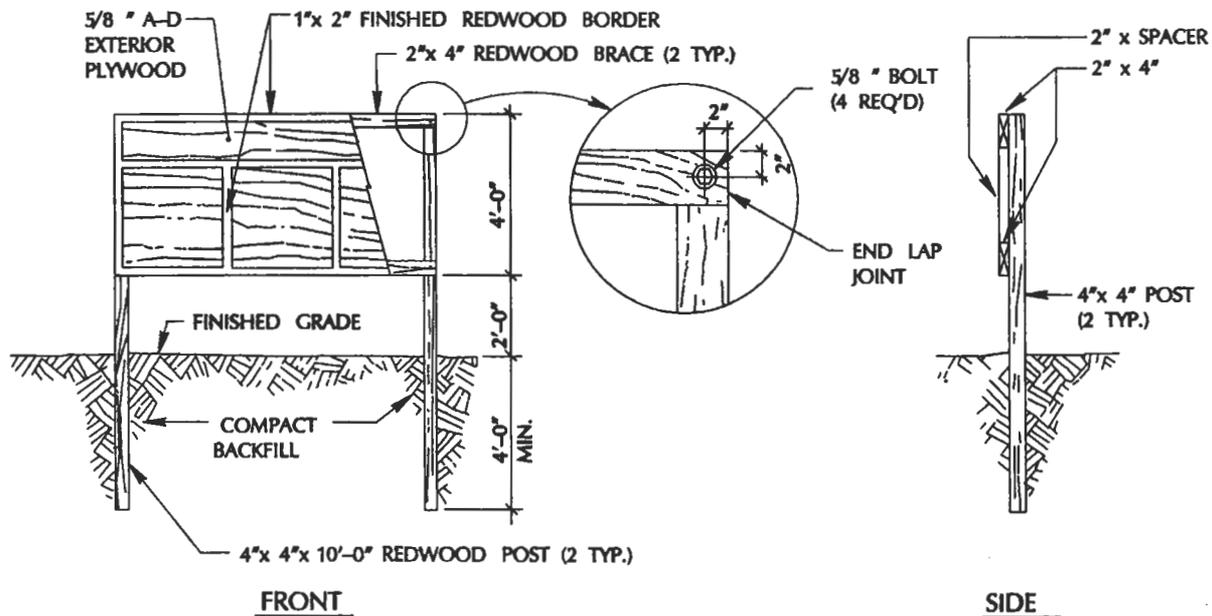
NOTE: WEIGHT 110 LB. (APPROX.)

APPROVED BY 	STANDARD RISER FRAME AND COVER		DRAWING NO. D-18
DATE 8-2-17-91			DEPARTMENT OF PUBLIC WORKS

LANDSCAPING



- NOTES:**
1. SEAL SHALL BE SUPPLIED BY THE CITY.
 2. ALL LETTERS SHALL BE PAINTED BLACK AND 'FUTURA' STYLE.
 3. SIGN SHALL BE BOLTED TO (2) 4"x 4"x 10'-0" LONG REDWOOD POSTS.
 4. SIGN SHALL BE LOCATED IN THE FIELD BY THE CITY INSPECTOR.
 5. CONTRACTOR SHALL REMOVE THE SIGN AS DIRECTED BY THE ENGINEER.
 6. CONTRACTOR SHALL BE NOTIFIED AT THE PRE-CONSTRUCTION MEETING ON THE NECESSARY WORDING TO BE PAINTED ON THE PROJECT SIGN.



APPROVED BY

[Signature]

DATE

4/3/92

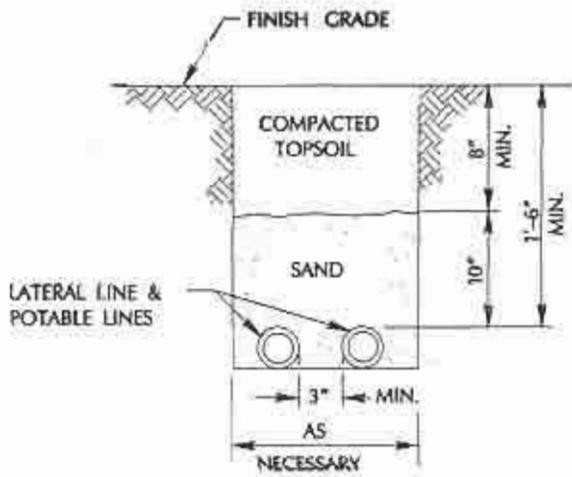
PROJECT SIGN

DEPARTMENT OF PUBLIC WORKS

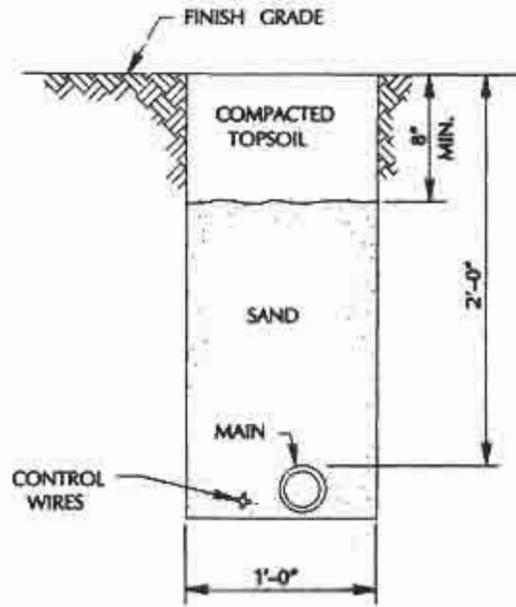


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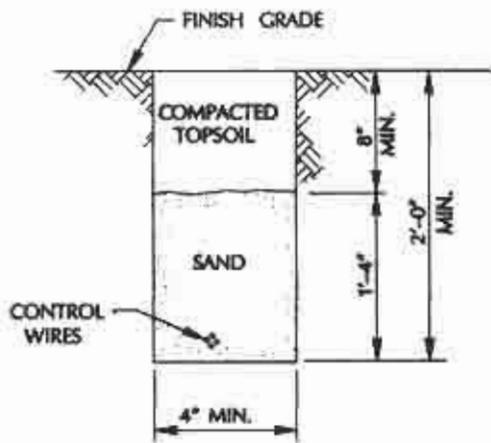
L-1



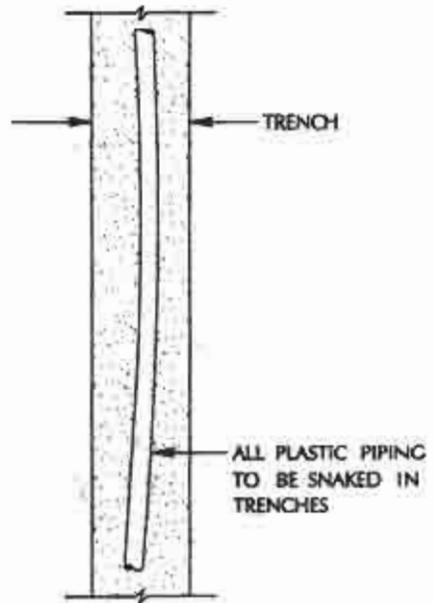
LATERAL LINE AND
POTABLE LINE



MAIN & CONDUCTORS



CONDUCTORS ONLY



NOTE: TAPE AND BUNDLE WIRING AT 10 FOOT INTERVALS.

APPROVED BY

[Signature]

DATE

1/20/19

IRRIGATION TRENCH

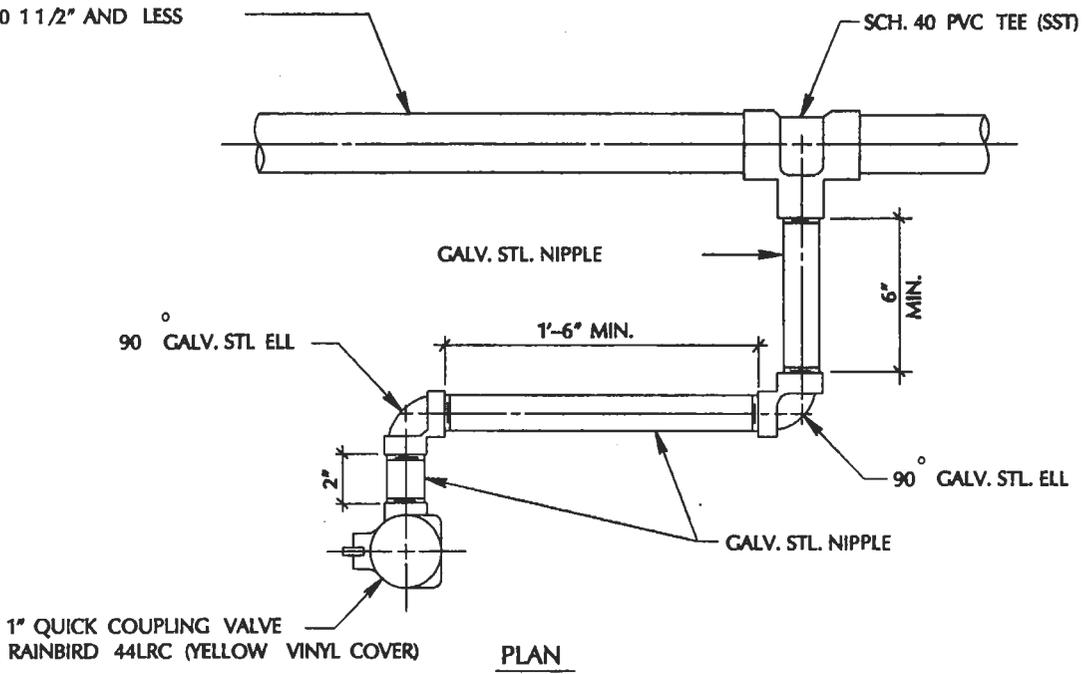
DEPARTMENT OF PUBLIC WORKS



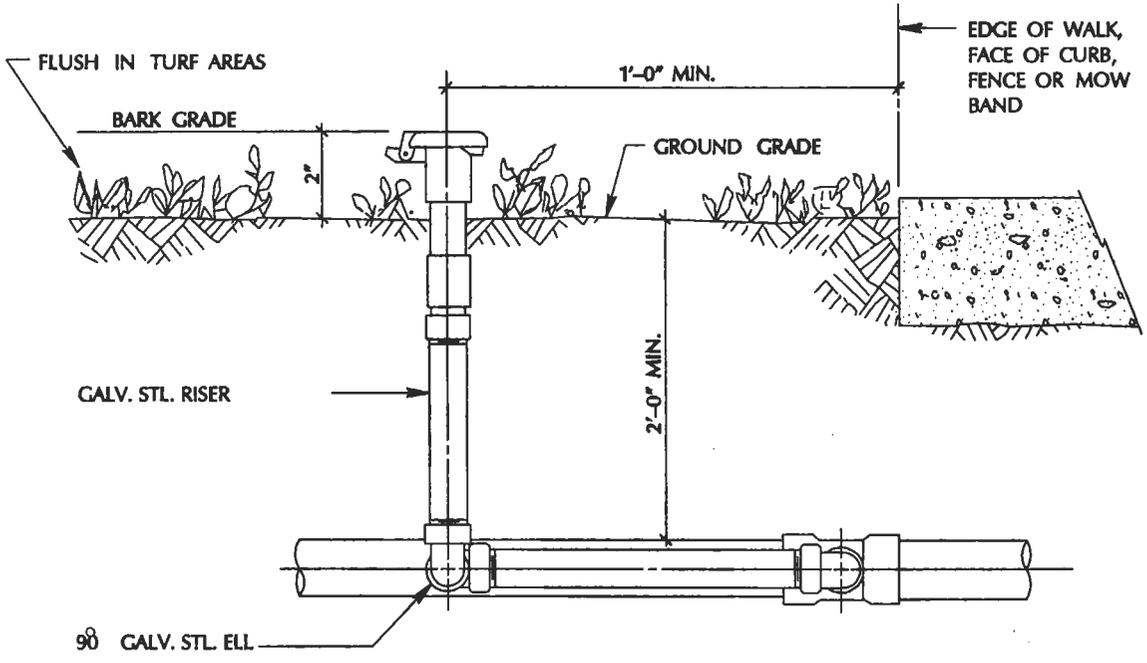
DRAWING NO.

L-2

CLASS 315 PVC MAIN, 2" MIN.
SCH. 40 1 1/2" AND LESS



PLAN



PROFILE

- NOTES:**
1. ALL GALVANIZED CONNECTIONS AND EXPOSED THREADED AREAS SHALL BE HEAVILY COATED WITH PIPE JOINT COMPOUND. TEFLON TAPE SHALL NOT BE ACCEPTABLE.
 2. STREET ELLS SHALL NOT BE ACCEPTABLE.

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[Signature]
DATE
11/20/11

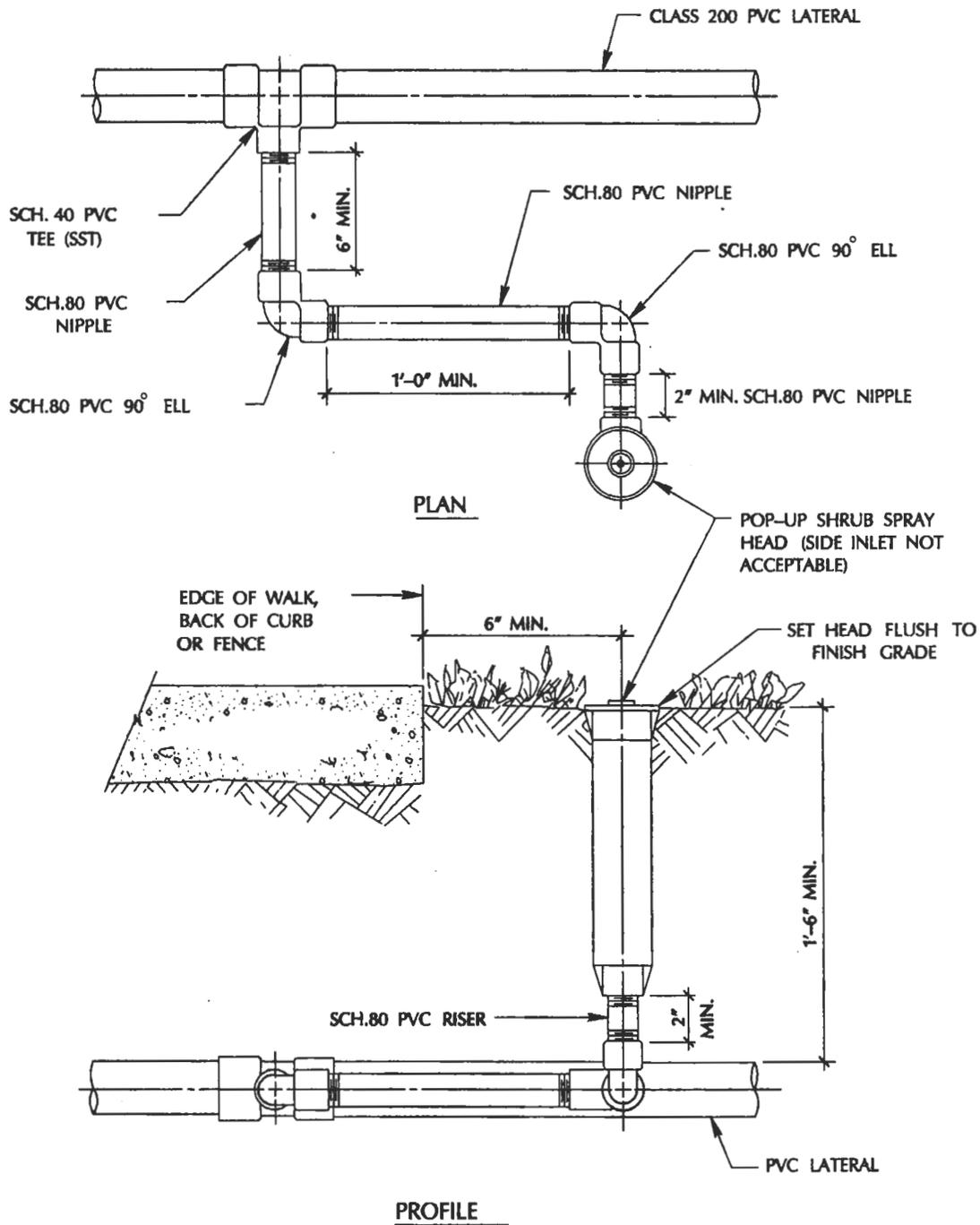
**QUICK COUPLING VALVE
(FOR PARKS, MEDIANS & BACK-UPS)**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

L-3



- NOTES:**
1. ALL ELEMENTS OF SWING JOINTS SHALL BE AS SHOWN AND OF THE SAME DIAMETER AS THE BASE OF HEAD BEING USED.
 2. STREET ELLS SHALL NOT BE ACCEPTABLE.

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[Signature]

DATE
 11/20/91

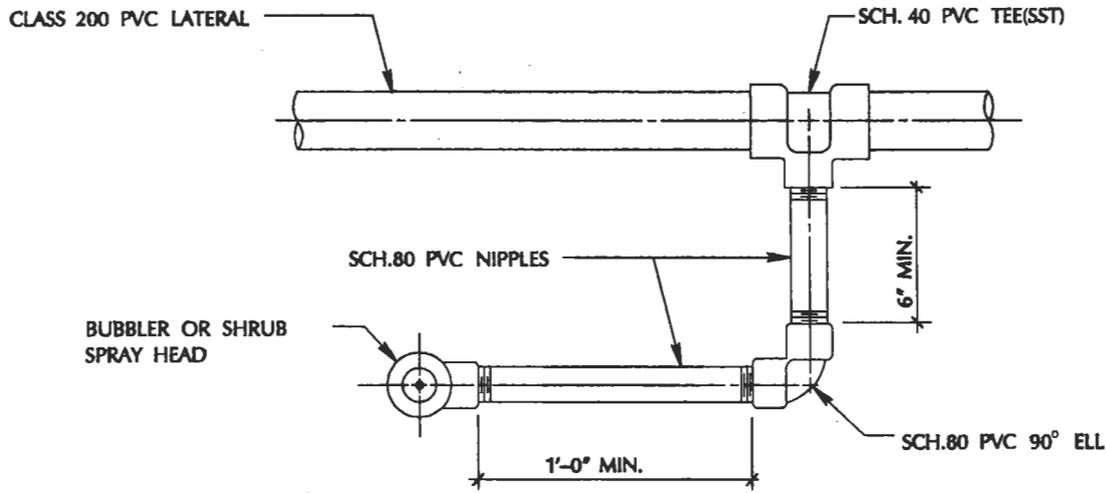
**HIGH POP-UP SHRUB HEAD
 (FOR MEDIANS & BACK-UPS ONLY)**

DEPARTMENT OF PUBLIC WORKS

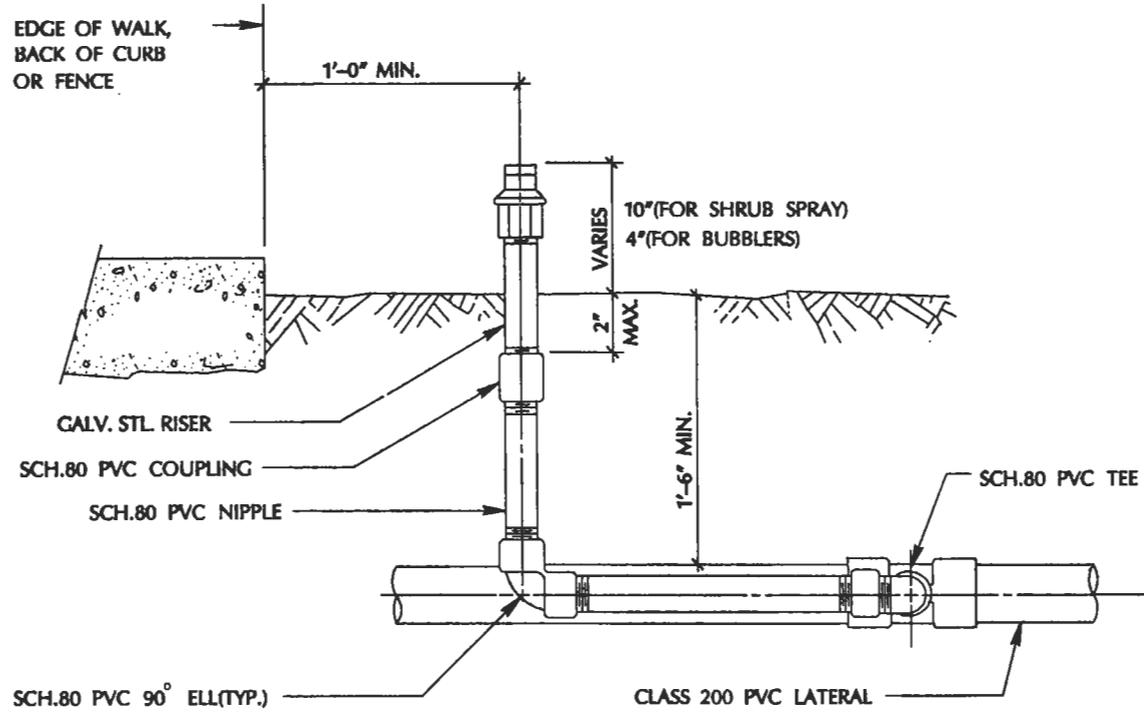


DRAWING NO.

L-4



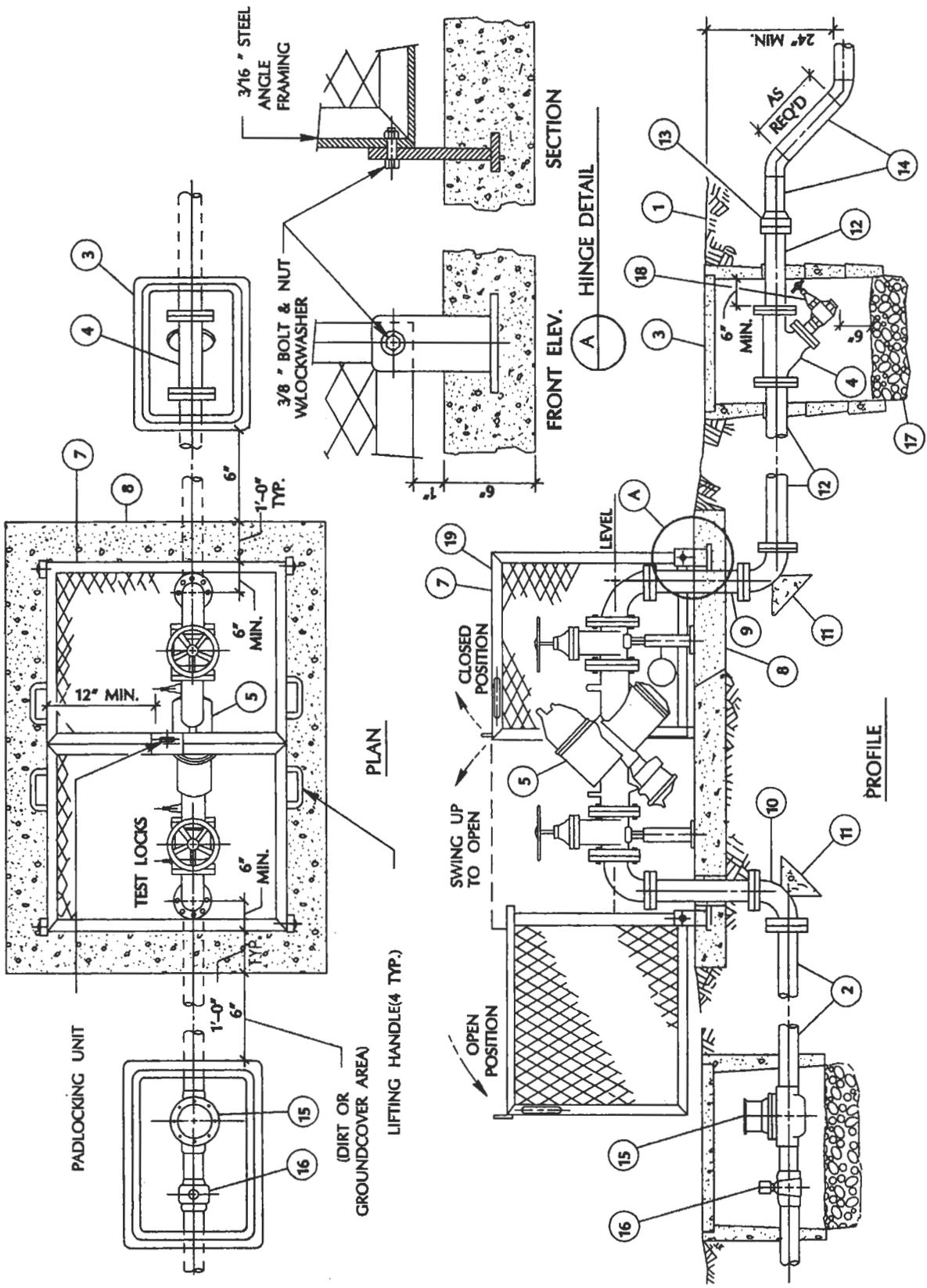
PLAN



PROFILE

- NOTES:**
1. ALL ELEMENTS OF SWING JOINTS SHALL BE AS SHOWN AND OF THE SAME DIAMETER AS THE BASE OF HEAD BEING USED.
 2. ALL GALVANIZED CONNECTIONS SHALL BE COATED WITH PIPE JOINT COMPOUND. ALL EXPOSED THREAD AREAS SHALL BE HEAVILY COATED WITH COMPOUND. TEFLON TAPE SHALL NOT BE ACCEPTABLE.
 3. STREET ELLS SHALL NOT BE ACCEPTABLE.

APPROVED BY 	BUBBLERS AND SHRUB SPRAY HEADS (FOR MEDIANS & BACK-UPS ONLY) DEPARTMENT OF PUBLIC WORKS		DRAWING NO. L-5
DATE 4/3/92			



(FOR MEDIAN ISLAND & NEIGHBORHOOD JOBS)
 (FOR SIZES 2 1/2" TO 4" WILKINS-575RP BACKFLOW UNITS)

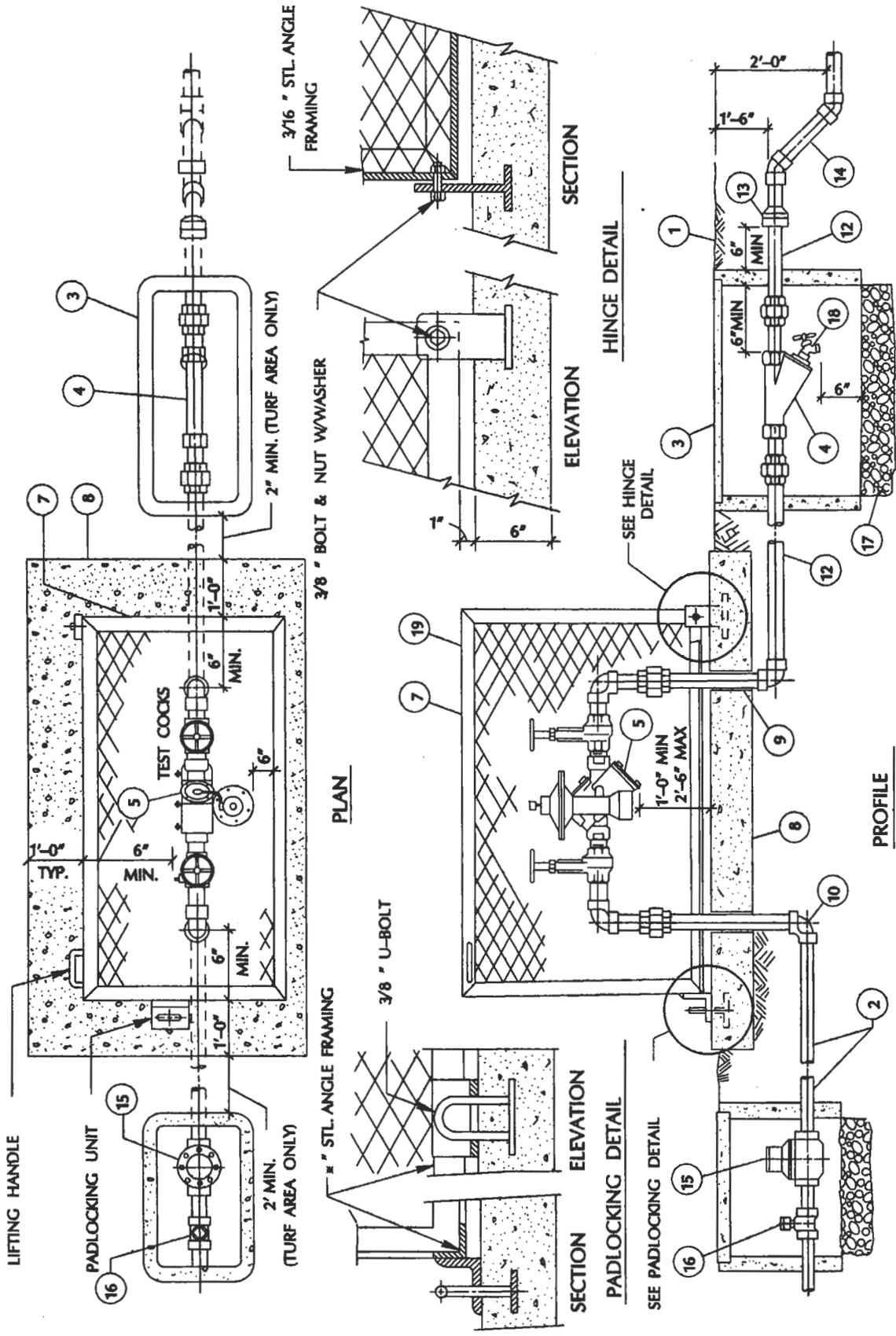
APPROVED BY
[Signature]
 DATE
 4/3/92

**R.P. BACKFLOW PREVENTER WITH
 DOUBLE-SWING HINGED ENCLOSURE**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
 L-7



FOR MEDIAN ISLAND AND NEIGHBORHOOD JOBS
 (FOR SIZES 3/4" TO 2" WILKINS-575RP BACKFLOW UNITS)

APPROVED BY
[Signature]

DATE
 4/3/92

**R.P. BACKFLOW PREVENTER WITH
 SINGLE-SWING HINGED ENCLOSURE**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
L-8

LEGEND:

- ① FINISH GRADE.
- ② SERVICE SIZE GALVANIZED STEEL PIPE FROM WATER METER.
- ③ PRECAST CONCRETE BOX AND TRAFFIC LID WITH EXTENSIONS, AS NECESSARY (SEE 'TABLE B- STRAINER UNIT DIMENSIONS').
- ④ Y-STRAINER SIMILAR TO BAILEY NO.100-A (SIZE AS SHOWN ON THE PLAN) WITH BLOW-OFF GATE VALVE, SPLIT-WEDGE TYPE, SIZED TO MATCH THE STRAINER BLOW-OFF OPENING AND INSTALLED AS SHOWN (FOR PARKS CONSTRUCTION ONLY).
- ⑤ REDUCED PRESSURE BACKFLOW PREVENTER. WILKINS 575RP FOR SIZES 3/4 " THROUGH 2" AND FOR SIZES 2 1/2 " THROUGH 4". UNIT SHALL BE SIZED AND INSTALLED AS SHOWN ON THE PLAN.
- ⑥ ADJUSTABLE PIPE SADDLE SUPPORT, GALVANIZED STEEL, SUITABLE FOR SUPPORTING GENERAL PIPING 3" AND LARGER, FROM FLOOR.
- ⑦ BACKFLOW PREVENTER ENCLOSURE MANUFACTURED BY LEMEUR. ENCLOSURE SHALL BE SINGLE- SWING TYPE FOR BACKFLOW UNIT SIZES 3/4 " THROUGH 2" AND DOUBLE- SWING ("CLAM SHELL") TYPE FOR SIZES 2 1/2 " THROUGH 4". FRAME SHALL BE 1 1/2 "x 1 1/2 "x 3/16 " STEEL ANGLE WITH 1 1/2 " #9 EXPANDED METAL, (SEE 'TABLE A - BACKFLOW UNIT DIMENSIONS' FOR SIZE REQUIREMENT) INSTALL AS SHOWN ON THE PLAN.
- ⑧ 6" CONCRETE ENCLOSURE PAD, SIZE AS SHOWN ON THE PLAN.
- ⑨ SERVICE SIZE GALV. STEEL PIPE RISER WITH A MINIMUM OF TWO (2) UNIONS FOR THREADED CONNECTIONS.
- ⑩ GALV. STEEL 90° ELL, FLANGED OR THREADED, SIZED AND INSTALLED AS SHOWN.
- ⑪ CONCRETE THRUST BLOCK (SEE PAGE W-7 OF THE STANDARD PLAN DETAILS FOR PUBLIC WORKS CONSTRUCTION).
- ⑫ SERVICE SIZE GALV. STEEL PIPE RISER WITH A MINIMUM OF TWO (2) UNIONS FOR THREADED CONNECTIONS.
- ⑬ PVC FEMALE ADAPTER.
- ⑭ MAIN PIPE, CLASS 315 PVC (SIZE AS SHOWN ON THE PLAN).
- ⑮ WATER METER BY OTHERS (SIZE AS SHOWN).
- ⑯ SHUT- OFF COCK BY OTHERS.
- ⑰ 3/4 " TO 1" SMOOTH DRAIN ROCKS, 6" DEPTH, MIN.
- ⑱ SIZE OF SHUT- OFF VALVE SHALL MATCH BLOW-OFF OPENING.
- ⑲ TWO COATS OF ENAMEL COLOR SPECIFIED BY THE ENGINEER.

NOTES:

1. GATE VALVES AND TEST COCKS ARE REQUIRED.
2. WATER SUPPLY- NO CONNECTIONS OR TEES WILL BE ALLOWED BETWEEN THE WATER METER AND BACKFLOW UNIT.
3. PROTECTION FROM FREEZE DAMAGE MAY BE REQUIRED IN EXPOSED AREAS.
4. DEVICE MUST BE ACCESSIBLE FOR TESTING AND MAINTENANCE.
5. WRAP BURIED GALVANIZED PIPE WITH 3M TAPE AS USED FOR GAS MAINS.

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DATE

11/20/91

**BACKFLOW PREVENTER UNIT
LEGEND & NOTES**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

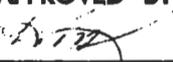
L-9

TABLE A - BACKFLOW UNIT DIMENSIONS

SIZE	WILKINS RP BACKFLOW PREVENTER			MINIMUM ENCLOSURE DIMENSIONS			
	MODEL	LENGTH	TYPE	W	L	H	TYPE
3/4 "	575 RP	11 3/8 "	SCREWED	12"	30"	30"	SINGLE - SWING HINGE
1"	575 RP	11 3/8 "	SCREWED	12"	30"	30"	SINGLE - SWING HINGE
1 1/2 "	575 RP	16 1/4 "	SCREWED	18"	42"	30"	SINGLE - SWING HINGE
2"	575 RP	16 1/4 "	SCREWED	18"	42"	30"	SINGLE - SWING HINGE
3"	575 RP	36"	FLANGED	30"	72"	42"	DOUBLE - SWING HINGE
4"	575 RP	46 1/2 "	FLANGED	30"	84"	42"	DOUBLE - SWING HINGE

TABLE B - STRAINER UNIT DIMENSIONS

SIZE	BAILEY NO. 100-A Y-STRAINER			REQUIRED CONCRETE BOX & TRAFFIC LID	
	LENGTH	CONN.	BLOW-OFF	CHRISTY MODEL	INSIDE DIMENSIONS
3/4 "-1"	4 1/2 "	SCREWED	1/2 " - 3/4 "	B-3	9 7/8 " x 16 1/4 "
1 1/2 "	6"	SCREWED	3/4 "	B-3	9 7/8 " x 16 1/4 "
2"	7 3/8 "	SCREWED	3/4 "	B-30	13 1/4 " x 24"
2 1/2 "	10 1/2 "	FLANGED	1 1/4 "	B-30	13 1/4 " x 24"
3"	12"	FLANGED	1 1/4 "	B-30	13 1/4 " x 24"
4"	14 9/16 "	FLANGED	1 1/2 "	B-30	13 1/4 " x 24"

APPROVED BY 	<h2 style="margin: 0;">DIMENSION TABLES</h2>		DRAWING NO. <h2 style="margin: 0;">L-10</h2>
DATE 11/10/11	DEPARTMENT OF PUBLIC WORKS		

EXPANSION JOINT EVERY 20'
 6" P.C.C. CURB BAND TO SEPARATE
 D.G. TRAIL FROM BARE DIRT
 AND GROUND COVER AREAS

1 1/2" MAX., 1" MIN.

BARE DIRT PLANTING AREA

6"
 3" 3"

1/2" R BOTH SIDES

4"

P.C.C. WALK

CLASS III AGGREGATE BASE

#4 REBAR, CONTINUOUS

SUBGRADE COMPACTED
 TO 95% DENSITY.

FIRST LAYER OF 2" DEEP D.G. PAVING
 COMPACTED TO 95% DENSITY

SECOND LAYER OF 2" DEEP D.G. PAVING
 COMPACTED TO 95% DENSITY

NOTE: FIRST LAYER OF D.G. SHALL BE COMPACTED
 BEFORE INSTALLATION OF SECOND LAYER.

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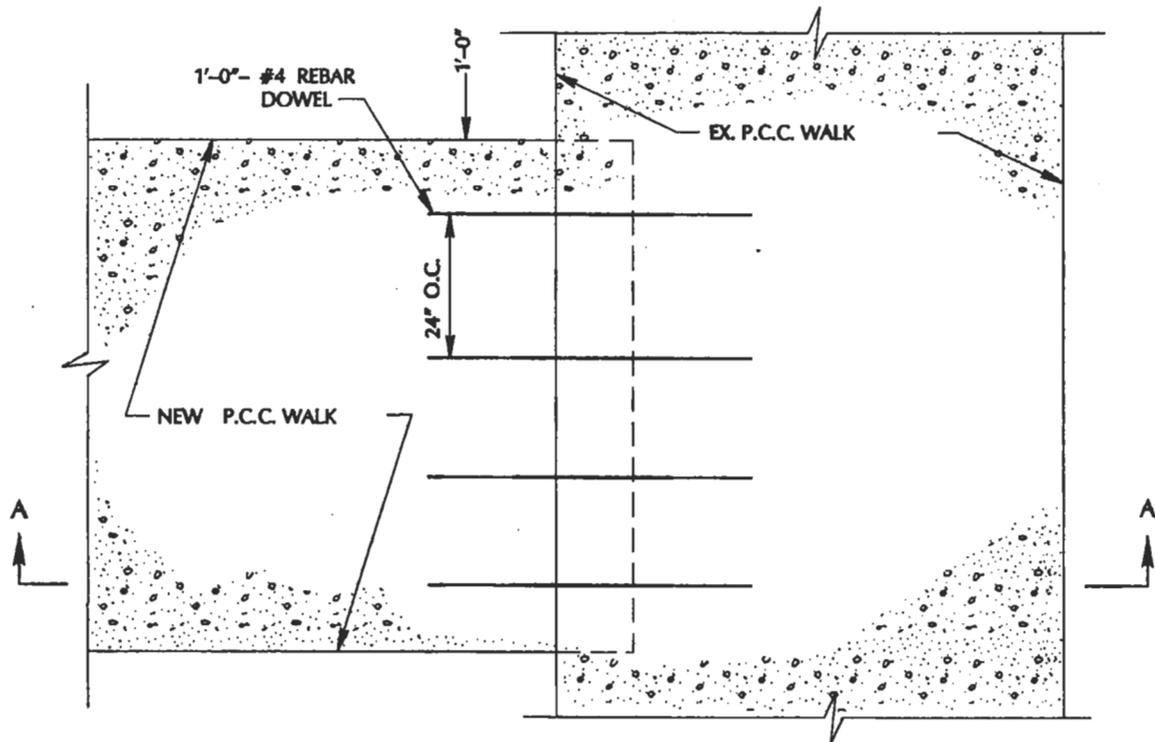
 DATE
 11/20/91

DECOMPOSED GRANITE PAVING

DEPARTMENT OF PUBLIC WORKS

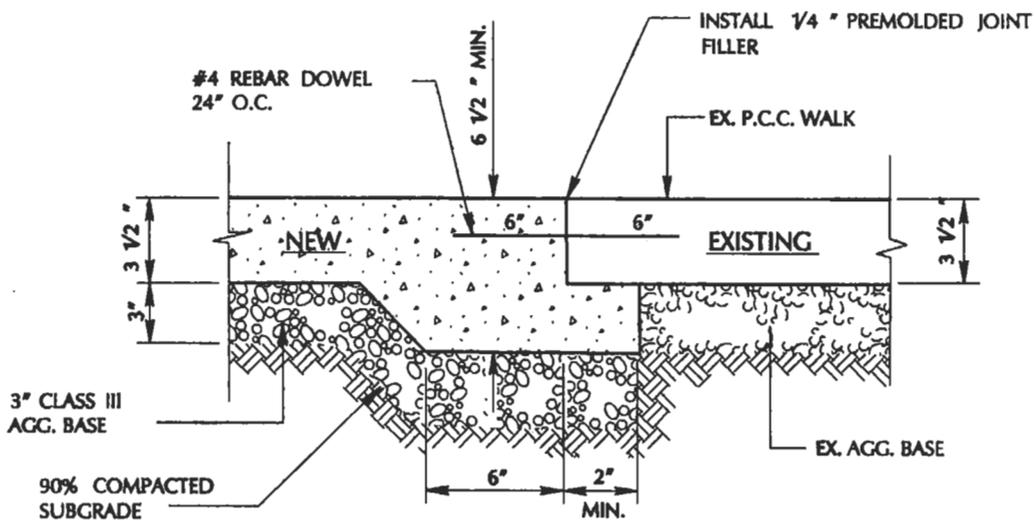


DRAWING NO.
 L-11



PLAN

- NOTE:
1. DRILL & EPOXY DOWEL INTO EX. P.C.C. & GREASE OTHER END TO SET INTO NEW CONCRETE.
 2. APPLY GREASE TO REBAR END AT NEW WALK ONLY.



SECTION A-A

APPROVED BY

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DATE

4/3/92

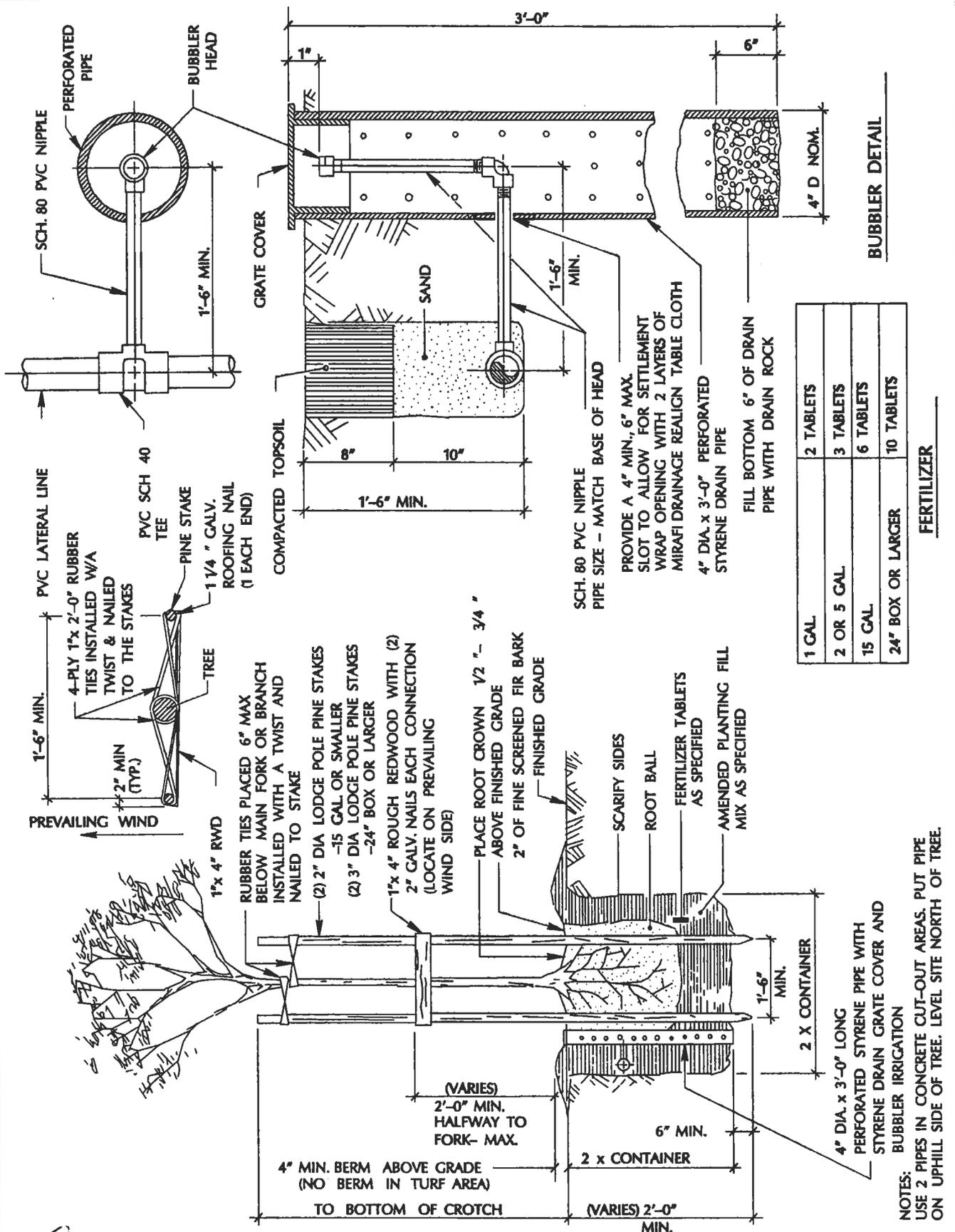
**P.C.C. WALKWAY NEW WALK
TO EXISTING CONNECTION
(TYPICAL)**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

L-12



1 GAL.	2 TABLETS
2 OR 5 GAL.	3 TABLETS
15 GAL.	6 TABLETS
24" BOX OR LARGER	10 TABLETS

FERTILIZER

NOTES:
 USE 2 PIPES IN CONCRETE CUT-OUT AREAS. PUT PIPE ON UPHILL SIDE OF TREE. LEVEL SITE NORTH OF TREE.

APPROVED BY

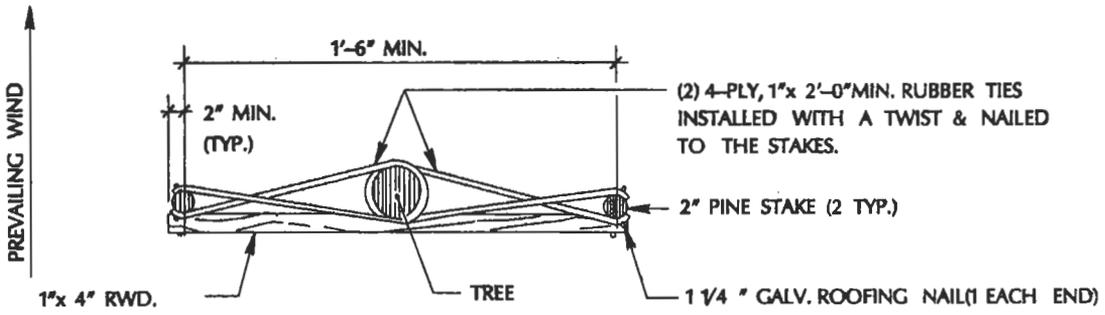
 DATE
 4/3/92

**TREE PLANTING
 WITH BUBBLER IRRIGATION**

DEPARTMENT OF PUBLIC WORKS

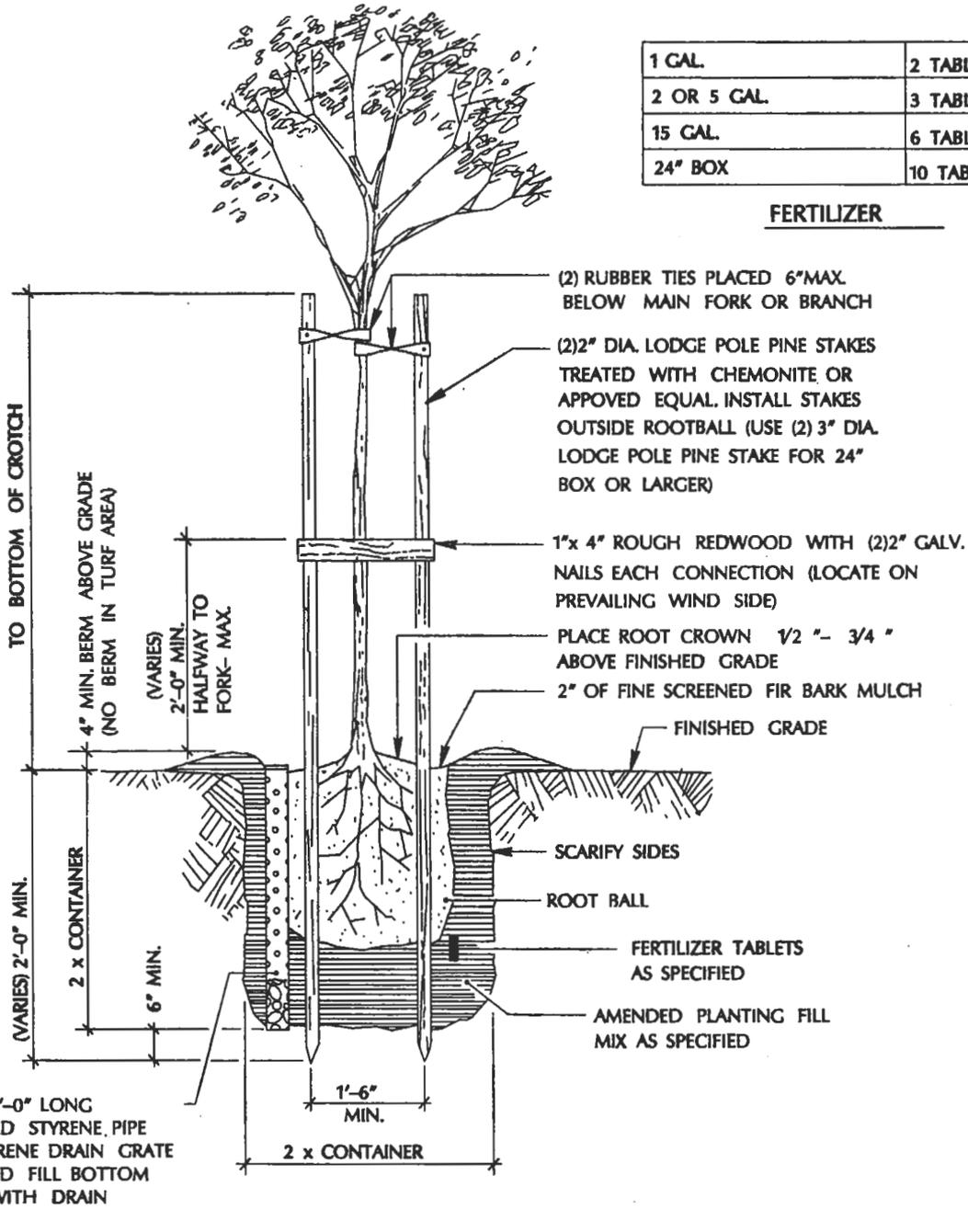


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L-13

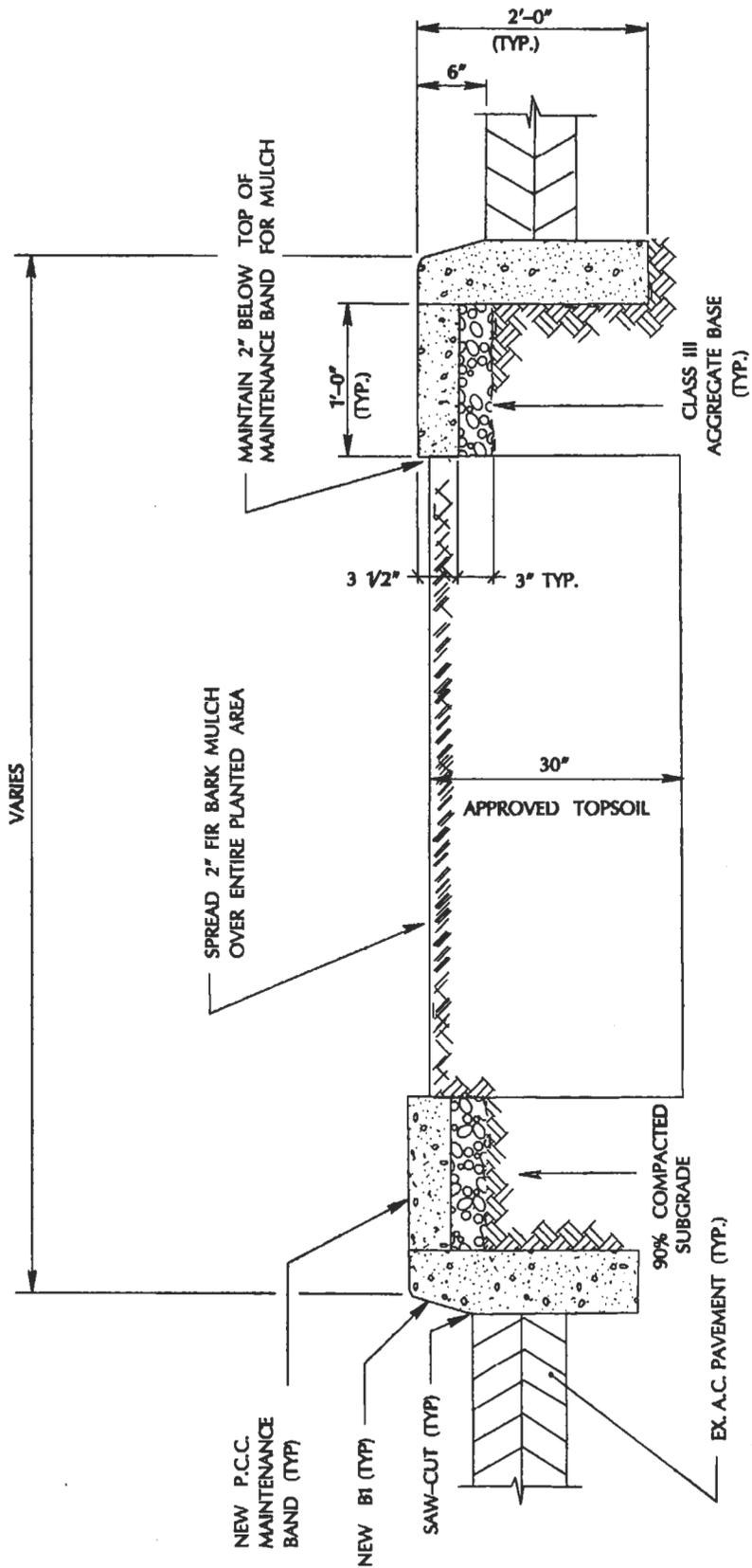


1 GAL.	2 TABLETS
2 OR 5 GAL.	3 TABLETS
15 GAL.	6 TABLETS
24" BOX	10 TABLETS

FERTILIZER



<p>APPROVED BY</p> 	<p align="center">STANDARD TREE PLANTING & STAKING DETAIL</p> <p align="center">DEPARTMENT OF PUBLIC WORKS</p>		<p>DRAWING NO.</p> <p align="center">L-14</p>
<p>DATE</p> <p>4/3/92</p>			



APPROVED BY

[Signature]

DATE

4/3/92

**TYPICAL MEDIAN ISLAND
CROSS - SECTION
(FOR NEW CURB)**

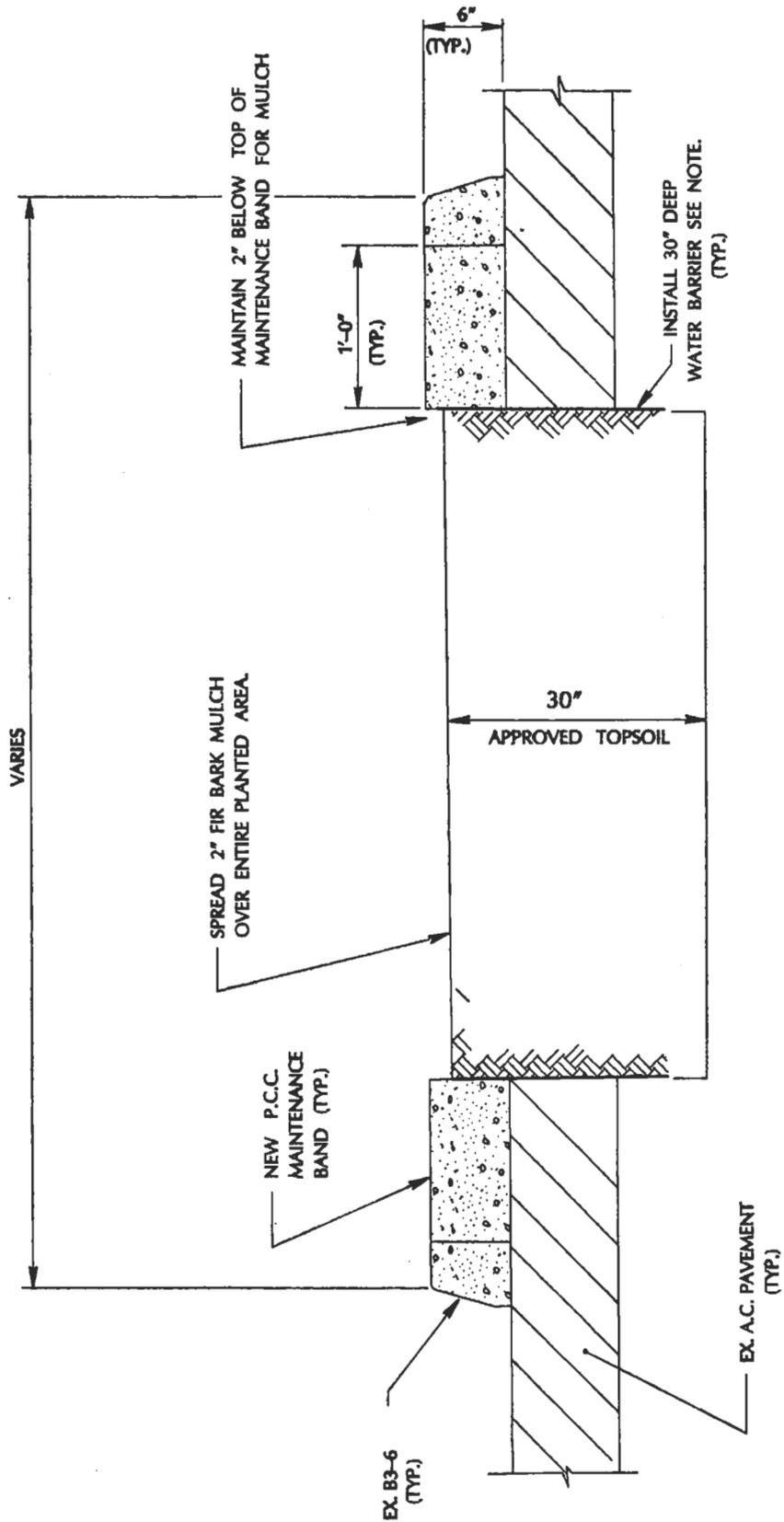
DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

L-15

NOTE: WATER BARRIER SHALL BE "DEEP ROOT WATER BARRIER", ITEM #WB24, MADE OF HIGH IMPACT POLYSTYRENE, .060 INCH THICK, WITH A MINIMUM TENSILE STRENGTH OF 3200 P.S.I., AS MANUFACTURED BY DEEP ROOT CORPORATION, OR APPROVED EQUAL



APPROVED BY

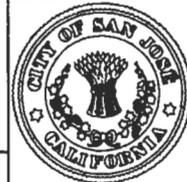
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DATE

4/2/92

MEDIAN ISLAND MAINTENANCE BAND DETAIL (FOR EXISTING CURB)

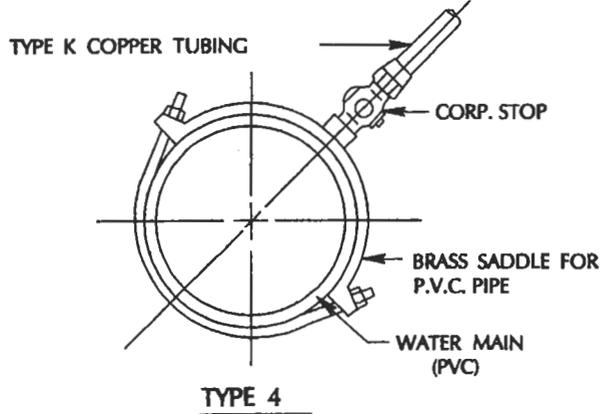
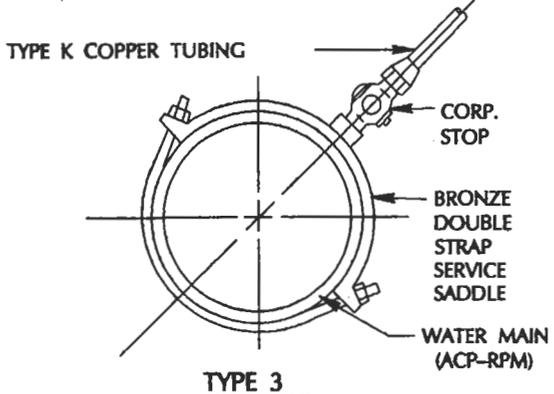
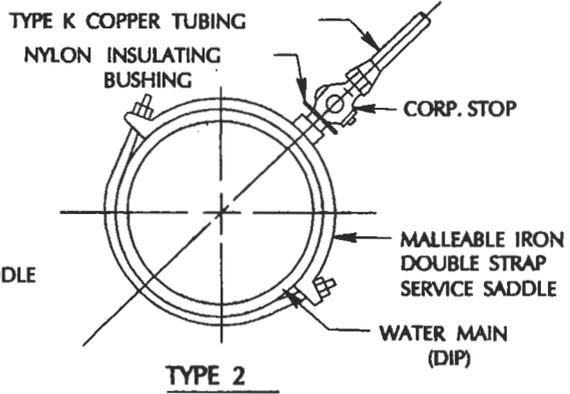
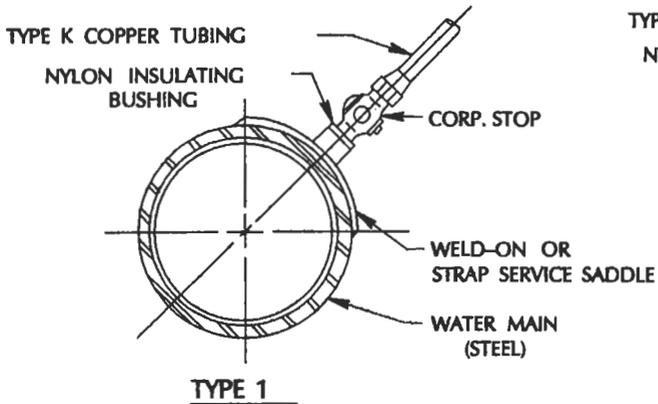
DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

L-16

MUNICIPAL WATER SYSTEMS



CORP. STOP	TYPE 1 & 2	TYPE 3 & 4
FORD	F1100G	F1000G
MUELLER	H15024	H15006

NOTES:

1. TYPE 1-INSTALL ANODE AS SHOWN IN STANDARD DETAIL W-15.
2. TYPES 1 & 2-WRAP CORPORATION STOP AND 5' OF COPPER TUBING WITH 10 MIL PVC TAPE (1/2" LAPPED).
3. TYPE 1-IF WATER MAIN IS COATED, REPLACE COATING ON MAIN AND COAT WELD-ON SERVICE SADDLE AND INSULATING BUSHING WITH 1/4" MIN. COATING OF SAME MATERIAL (OR 10 MIL PVC TAPE)
4. TYPE 2- IF MAIN IS POLYWRAPPED, REPAIR AND EXTEND POLYWRAP TO COVER CORPORATION STOP.
5. FOR WATER METER INSTALLATION SEE STANDARD DETAIL W-2.
6. ALL BRASS CORPS FOR BRASS SADDLES SHALL HAVE CC THREADS (SADDLES AND CORPS)

SERVICE CONNECTION SCHEDULE					
SERVICE SIZE	WATER MAIN MATERIAL				
	STEEL	D.I.P.	A.C.P.	R.P.M.	P.V.C.
3/4"	TYPE 1	TYPE 2	TYPE 3	TYPE 3	TYPE 4
1"	"	"	"	"	"
1- 1/2"	"	"	"	"	"
2"	"	"	"	"	"

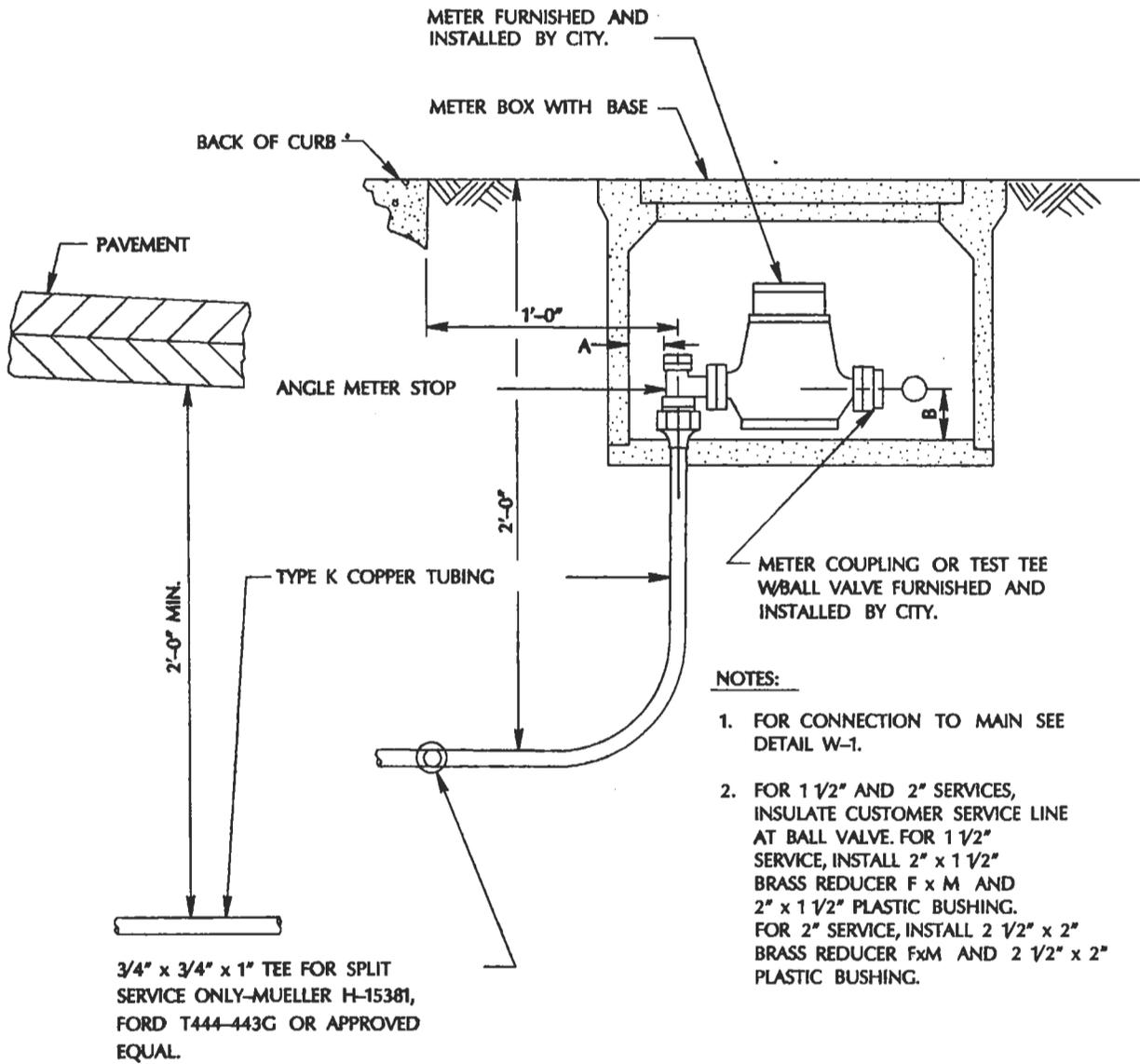
APPROVED BY
W.S.H.
DATE
4/2/92

**CONNECTION TYPES FOR
3/4" - 2" SERVICE TAPS**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
W-1



NOTES:

1. FOR CONNECTION TO MAIN SEE DETAIL W-1.
2. FOR 1 1/2" AND 2" SERVICES, INSULATE CUSTOMER SERVICE LINE AT BALL VALVE. FOR 1 1/2" SERVICE, INSTALL 2" x 1 1/2" BRASS REDUCER F x M AND 2" x 1 1/2" PLASTIC BUSHING. FOR 2" SERVICE, INSTALL 2 1/2" x 2" BRASS REDUCER FxM AND 2 1/2" x 2" PLASTIC BUSHING.

METER SIZE	METER BOX	ANGLE METER STOP		BALL VALVE		CRITICAL DIMENSIONS	
	CHRISTY	FORD	MUELLER	FORD	MUELLER	A	B
5/8" x 3/4"	B12, B125, B30SL	KV43-332WG	H-14258	NOT REQUIRED	NOT REQUIRED	1" MIN.	2 3/4"
1"	B12, B125, B30SL	KV43-342WG	H-14258	NOT REQUIRED	NOT REQUIRED	1 1/2" MIN.	3"
1 1/2" D	B44, B44E2, B44X4, B44SL	FV43-666WG	H-14277	BF13-666	B20283	1 1/2" MIN.	3 1/4"
2" D	B44, B44E2, B44X4, B44SL	FV43-777WG	H-14277	BF11-777	B20283	2" MIN.	3 3/4"
2" T	B44, B44E2, B44X4, B44SL	FV43-777WG	H-14277	BF11-777	B20283	2" MIN.	2 3/4"

APPROVED BY

wsb

DATE

4-2-92

WATER METER SERVICES

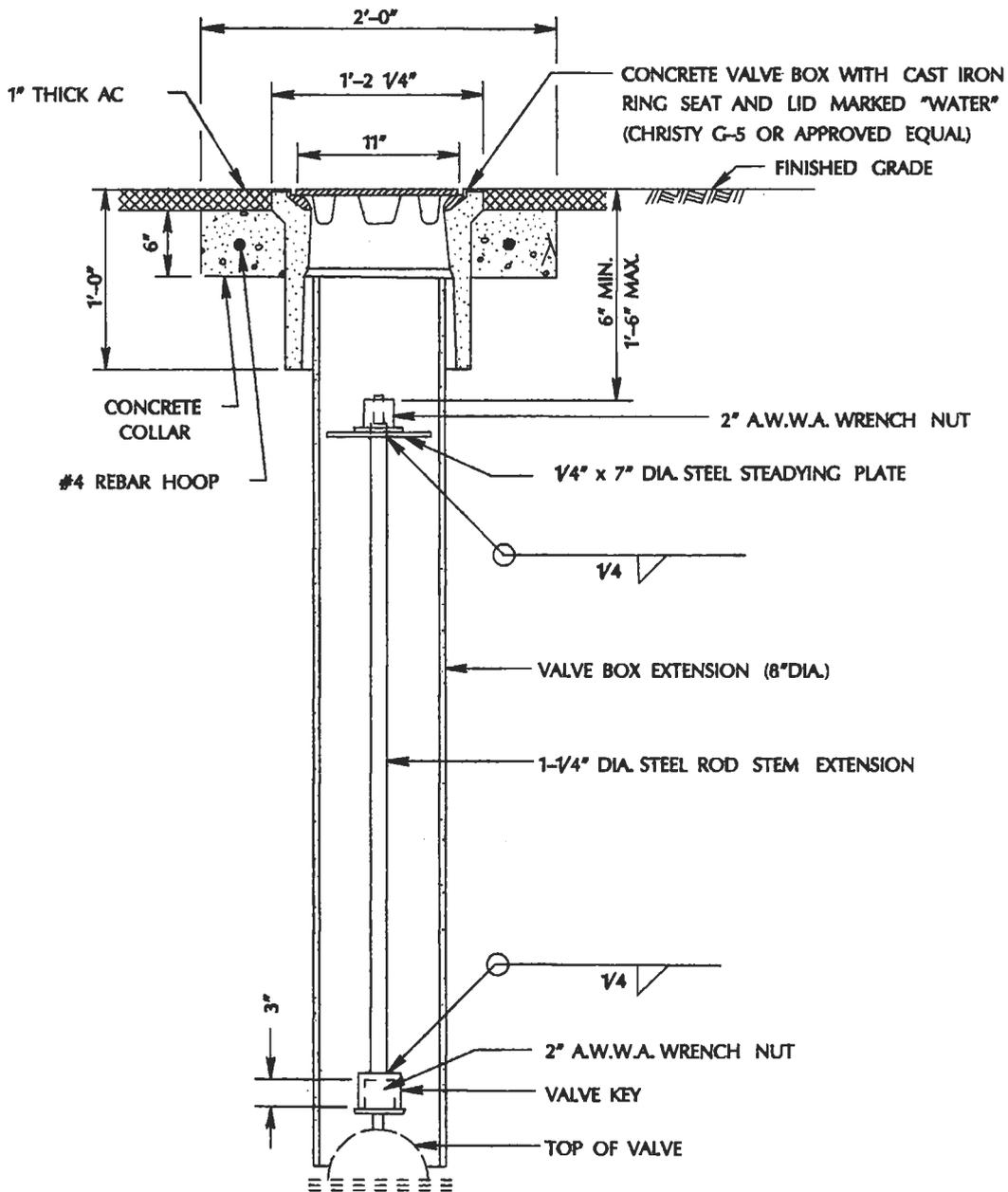
3/4" - 2"

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

W-2



NOTES :

1. MILL TOP OF STEM EXTENSION TO ACCEPT A.W.W.A. WRENCH NUT AND PEEN TOP OF EXTENSION TO SECURE NUT.
2. STEM EXTENSION REQUIRED ONLY WHEN THE DEPTH TO TOP OF VALVE OPERATOR NUT IS GREATER THAN 3'-0".
3. VALVE BOX EXTENSION MAY BE 8" PVC CLASS150 PIPE MATERIAL.

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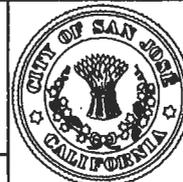
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[Date]

VALVE BOX INSTALLATION

DEPARTMENT OF PUBLIC WORKS

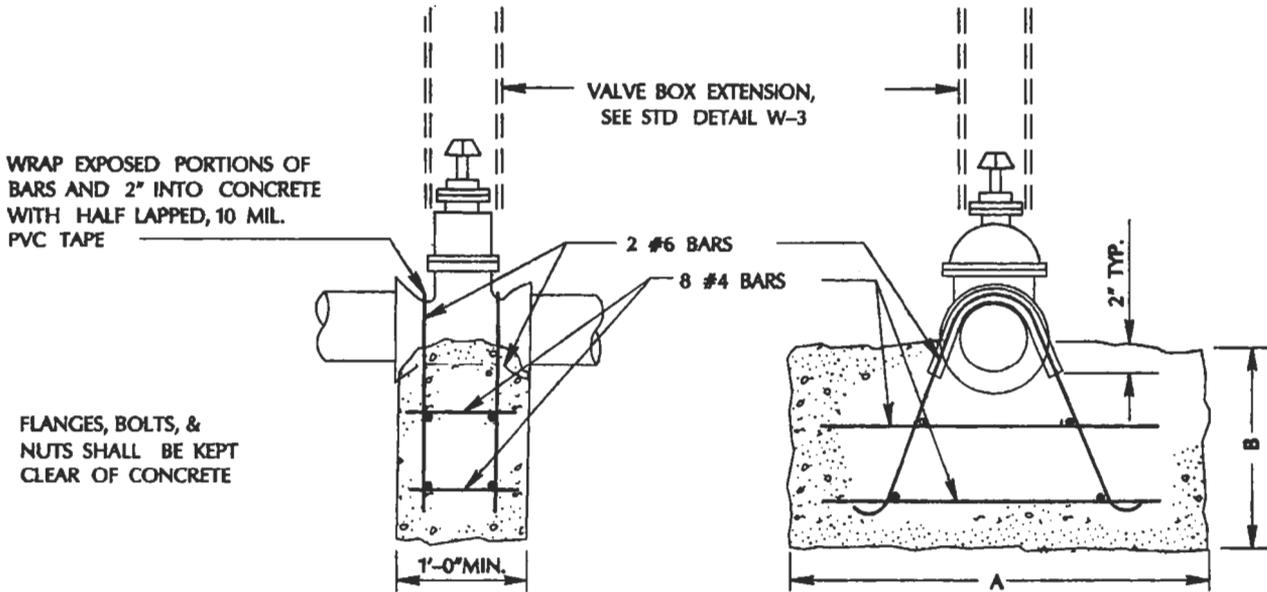


DRAWING NO.

W-3

NOTE:

ENCASE ALL BURIED METALLIC SURFACES WITH POLYETHYLENE WRAP (8 MIL. MIN.) AS SPECIFIED IN A.W.W.A. C105.



SIZE OF GATE VALVE	ANCHOR BLOCK DIMENSIONS (FT.)		
	A	B	
		200 PSI TEST	250 PSI TEST
3"	1.5	1.5	2.0
4"	2.0	1.5	2.0
6"	3.0	1.5	2.0
8"	3.0	1.5	2.0
10"	3.0	2.0	2.5
12"	3.5	2.0	2.5

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DATE

[Date]

VALVE ANCHOR BLOCKS

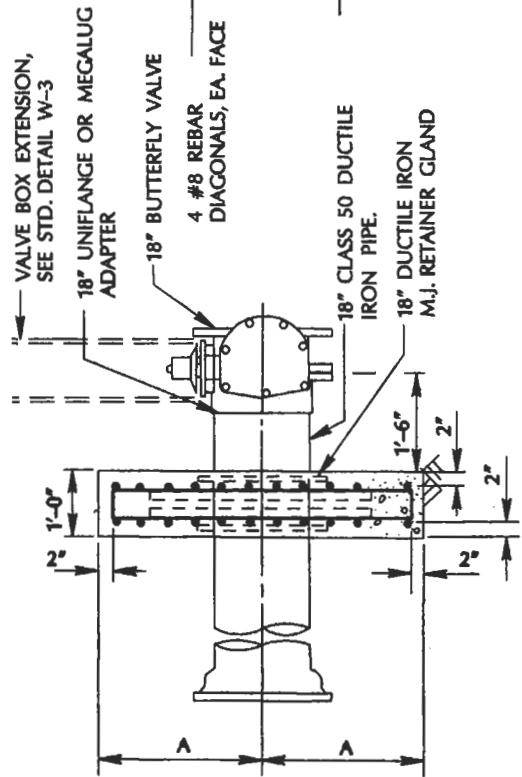
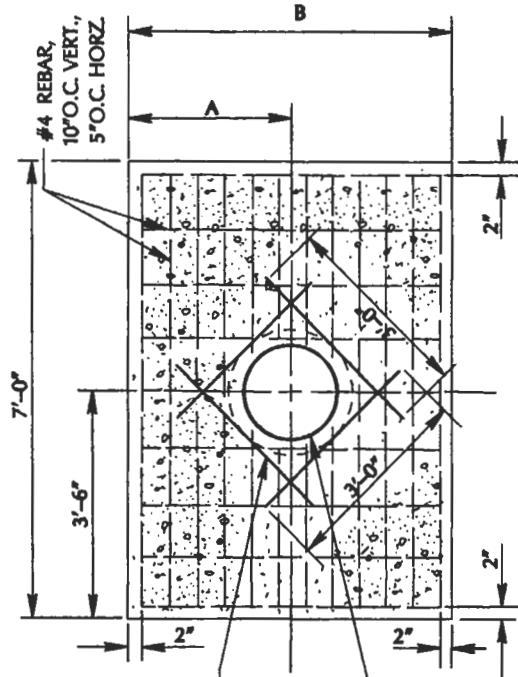
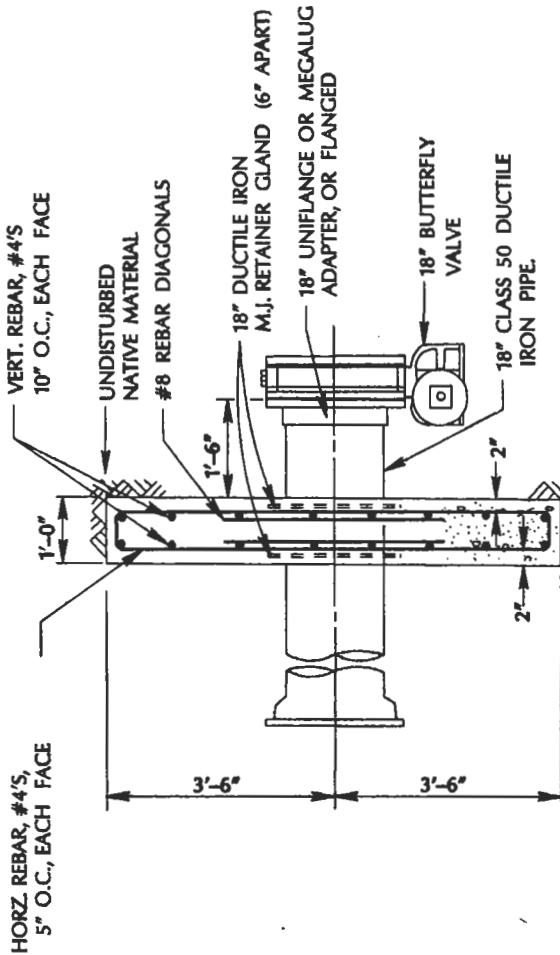
DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

W-4

	200 PSI TEST	250 PSI TEST
A	2'-6"	3'-0"
B	5'-0"	6'-0"

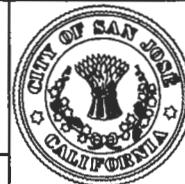


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Wash

DATE
7-2-92

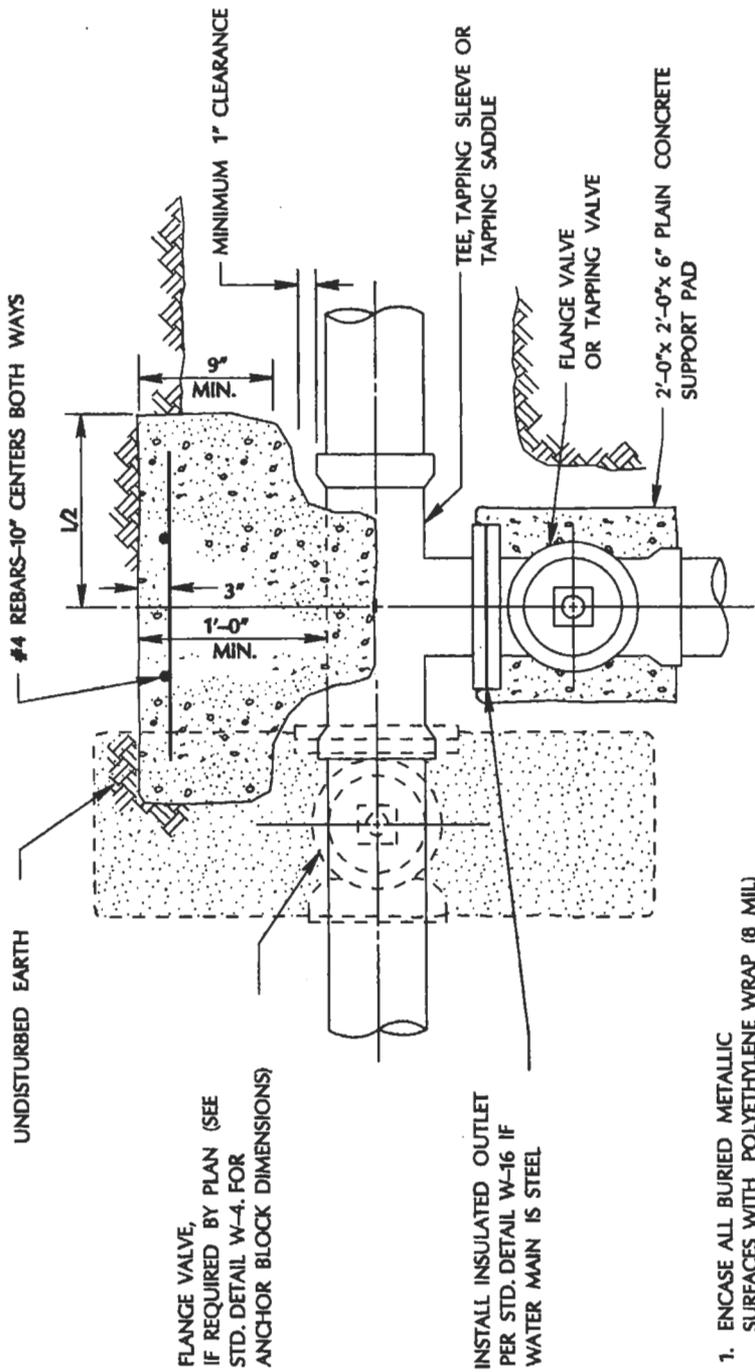
**18" BUTTERFLY VALVE
ANCHOR BLOCK**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

W-5

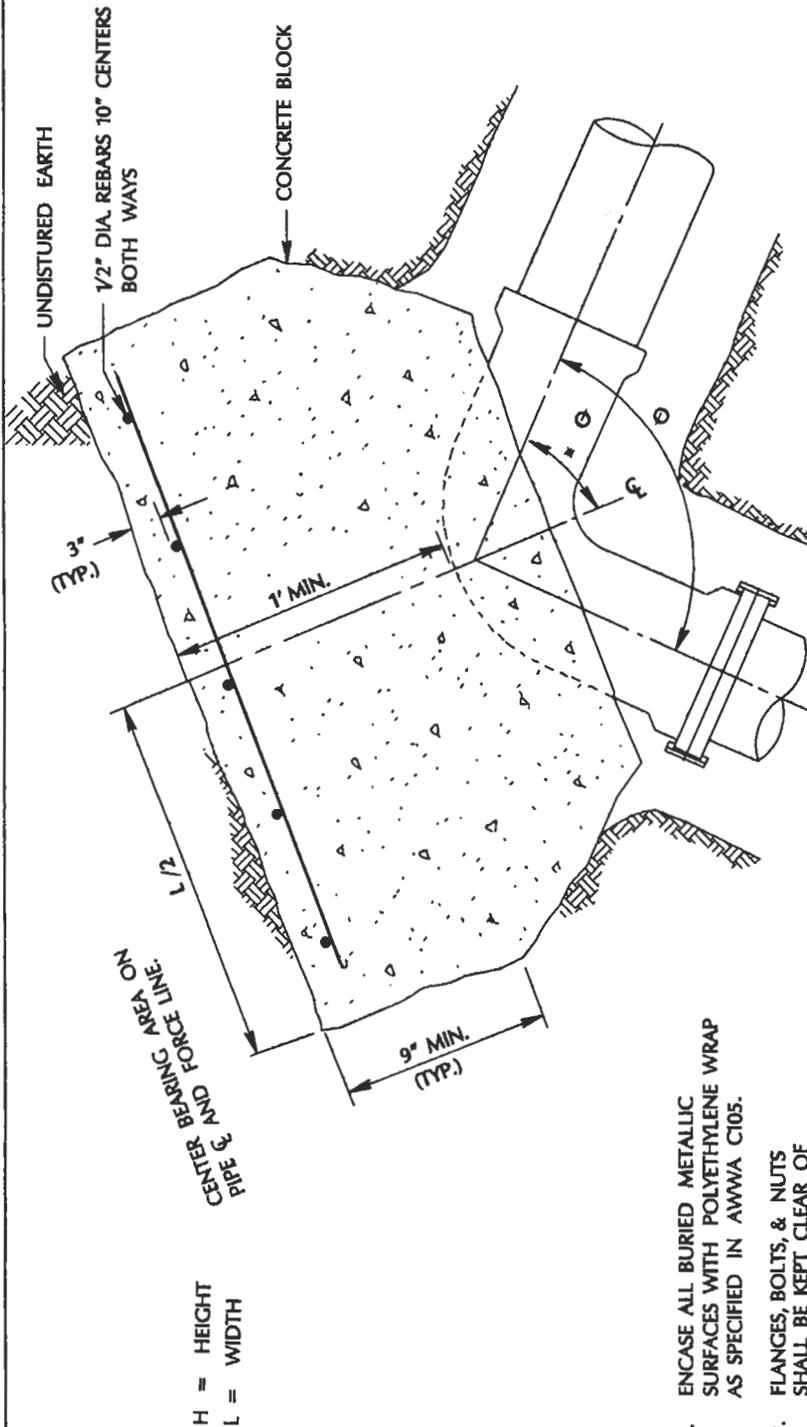


NOTES:

1. ENCASE ALL BURIED METALLIC SURFACES WITH POLYETHYLENE WRAP (8 MIL) AS SPECIFIED IN AWWA C105.
2. FLANGES, BOLTS, & NUTS SHALL BE KEPT CLEAR OF CONCRETE
3. AT ALL TEE CONNECTIONS, VALVES SHALL BE FLANGED BY HUB, BOLTED TO TEE

BRANCH PIPE SIZE	L x H	
	200 PSI TEST	250 PSI TEST
3" OR 4"	1'5" x 1'5"	1'7" x 1'7"
6"	1'9" x 1'9"	2'0" x 2'0"
8"	2'3" x 2'3"	2'6" x 2'6"
10"	3'0" x 3'0"	3'6" x 3'6"
12"	3'10" x 3'10"	4'4" x 4'4"
18"	5'10" x 5'10"	6'6" x 6'6"

APPROVED BY <i>wsh</i>	TEE THRUST BLOCK		DRAWING NO. W-6
DATE <i>4-2-92</i>	DEPARTMENT OF PUBLIC WORKS		



H = HEIGHT
L = WIDTH

- NOTES:
1. ENCASE ALL BURIED METALLIC SURFACES WITH POLYETHYLENE WRAP AS SPECIFIED IN AWWA C105.
 2. FLANGES, BOLTS, & NUTS SHALL BE KEPT CLEAR OF CONCRETE.
 3. CENTER OF H COINCIDES WITH CENTERLINE OF PIPE

PIPE SIZE	DIMENSIONS - L x H (200 PSI TEST)			DIMENSIONS - L x H (250 PSI TEST)		
	11 1/4°	22 1/2°	45°	90°	45°	90°
6"	10' x 10'	15' x 15'	19' x 19'	23' x 23'	18' x 18'	20' x 20'
8"	10' x 10'	15' x 15'	20' x 20'	210' x 210'	18' x 18'	23' x 23'
10"	15' x 15'	20' x 20'	28' x 28'	35' x 35'	23' x 23'	30' x 30'
12"	19' x 19'	23' x 23'	30' x 30'	42' x 42'	26' x 26'	40' x 40'
14"	19' x 19'	28' x 28'	36' x 36'	410' x 410'	30' x 30'	40' x 40'
16"	20' x 20'	210' x 210'	40' x 40'	55' x 55'	30' x 30'	50' x 40'
18"	30' x 30'	40' x 40'	50' x 50'	66' x 66'	50' x 40'	76' x 40'

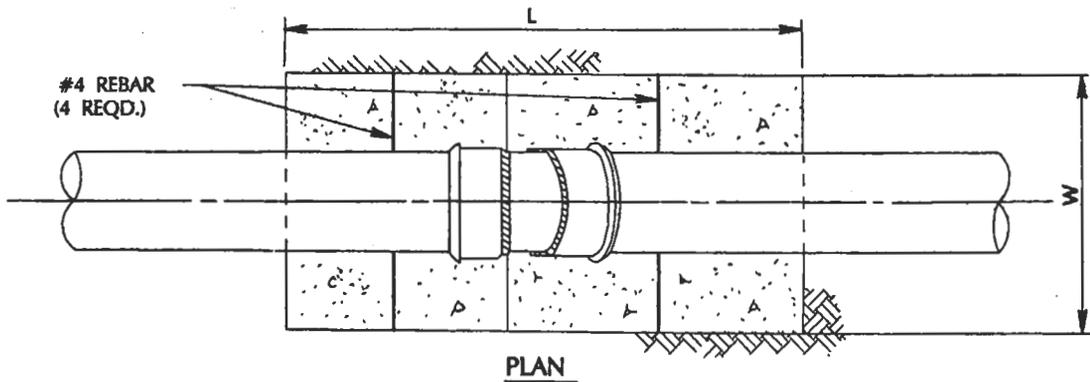
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DATE
4-2-92

ELBOW THRUST BLOCK, HORIZONTAL AND DOWNWARD THRUSTS

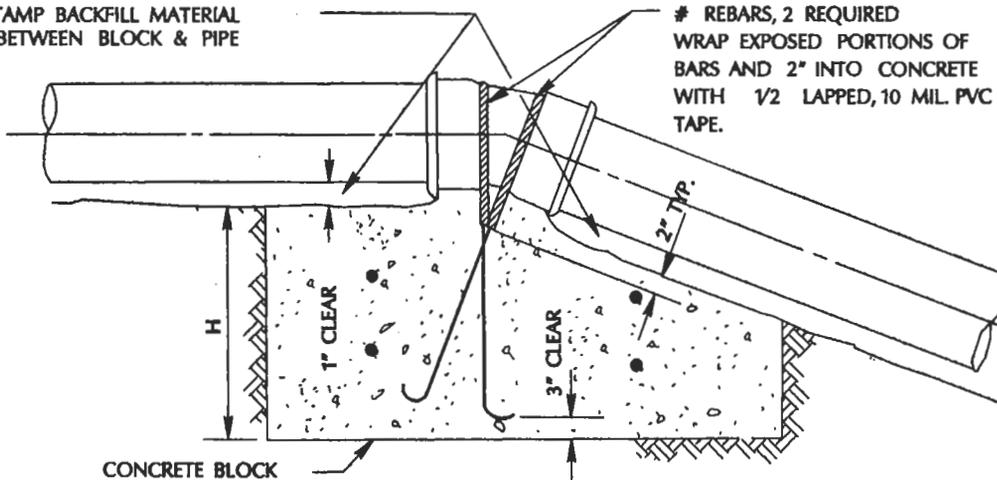
DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
W-7



TAMP BACKFILL MATERIAL BETWEEN BLOCK & PIPE



REBARS, 2 REQUIRED
WRAP EXPOSED PORTIONS OF
BARS AND 2" INTO CONCRETE
WITH 1/2 LAPPED, 10 MIL PVC
TAPE.

ELEVATION

- NOTES:
1. ENCASE ALL BURIED METALLIC SURFACES WITH POLYETHYLENE WRAP AS SPECIFIED IN AWWA C105.
 2. FLANGES, NUTS & BOLTS SHALL BE CLEAR OF CONCRETE.

DIMENSIONS (200 PSI TEST)

PIPE SIZE	11 1/4° BEND			22 1/2° BEND			45° BEND		
	L	W	H	L	W	H	L	W	H
6"	2'0"	2'0"	1'0"	2'0"	2'0"	2'0"	2'0"	2'0"	2'0"
8"	2'0"	2'0"	1'0"	2'0"	3'0"	2'0"	2'0"	4'0"	2'0"
10"	2'0"	3'0"	2'0"	2'0"	4'0"	2'0"	2'0"	4'0"	3'0"
12"	2'0"	3'0"	2'0"	2'0"	6'0"	2'0"	2'0"	6'6"	3'0"
18"	3'0"	3'0"	3'0"	3'0"	6'0"	3'0"	3'0"	5'0"	5'0"

DIMENSIONS (250 PSI TEST)

PIPE SIZE	11 1/4° BEND			22 1/2° BEND			45° BEND		
	L	W	H	L	W	H	L	W	H
6"	2'0"	2'6"	1'0"	2'0"	2'6"	2'0"	2'0"	3'0"	2'0"
8"	2'0"	2'6"	1'0"	2'0"	3'9"	2'0"	2'0"	5'0"	2'0"
10"	2'0"	2'6"	2'0"	2'0"	5'0"	2'0"	2'0"	5'0"	3'0"
12"	2'0"	3'9"	2'0"	2'0"	6'0"	2'6"	2'0"	6'0"	4'0"
18"	3'0"	3'9"	3'0"	3'0"	5'6"	4'0"	3'0"	7'0"	5'0"

APPROVED BY

DATE

4-2-92

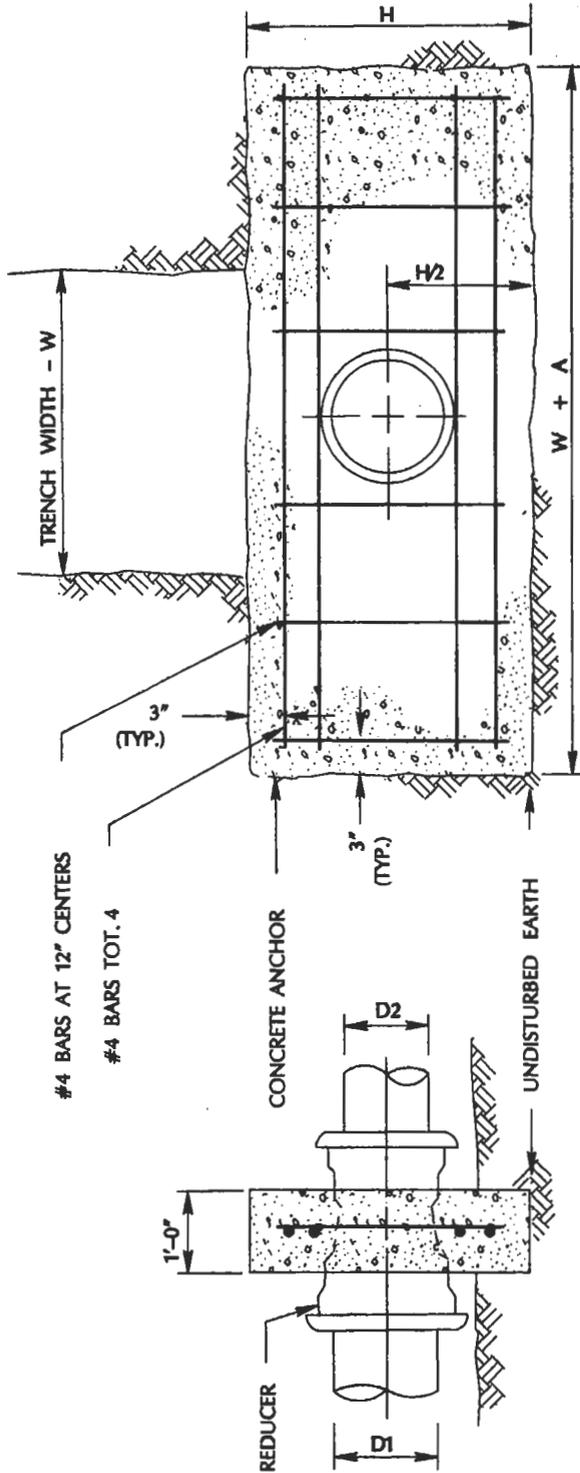
ELBOW ANCHOR BLOCK,
UPWARD THRUST

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

W-8



REDUCER SIZE D1 x D2	ANCHORS FOR REDUCERS			
	250 PSI TEST		200 PSI TEST	
	H	A	H	A
18" x 12"	3'9"	5'0"	3'0"	5'0"
12" x 10"	1'8"	2'0"	1'4"	2'0"
12" x 8"	2'6"	2'6"	2'0"	2'6"
12" x 6"	2'6"	3'0"	2'0"	3'2"
8" x 6"	1'3"	2'0"	1'0"	2'0"
8" x 4"	1'3"	3'0"	1'0"	2'10"
6" x 4"	1'4"	1'4"	1'0"	1'4"

- NOTES:**
1. ENCASE ALL BURIED METALLIC SURFACES WITH POLYETHYLENE WRAP AS SPECIFIED IN AWWA C105.
 2. REDUCER ANCHOR IS REQUIRED ONLY WHEN LARGER CONNECTING JOINT IS OTHER THAN FLANGED.

APPROVED BY

Wick

DATE

4-2-72

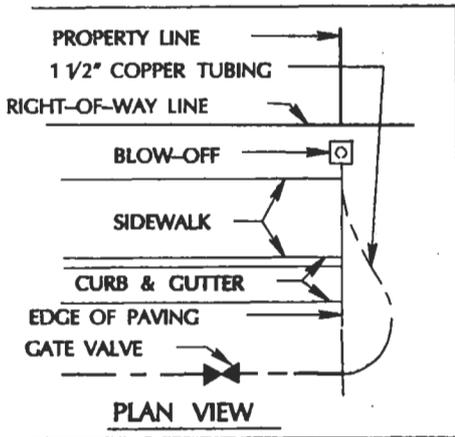
REDUCER ANCHOR BLOCK

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

W-9

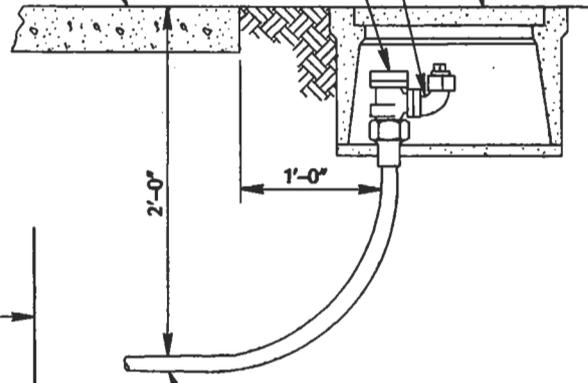


METER BOX WITH BASE; CHRISTY B9, FL9D, B9SL
BROOKS NO. 36 OR APPROVED EQUAL

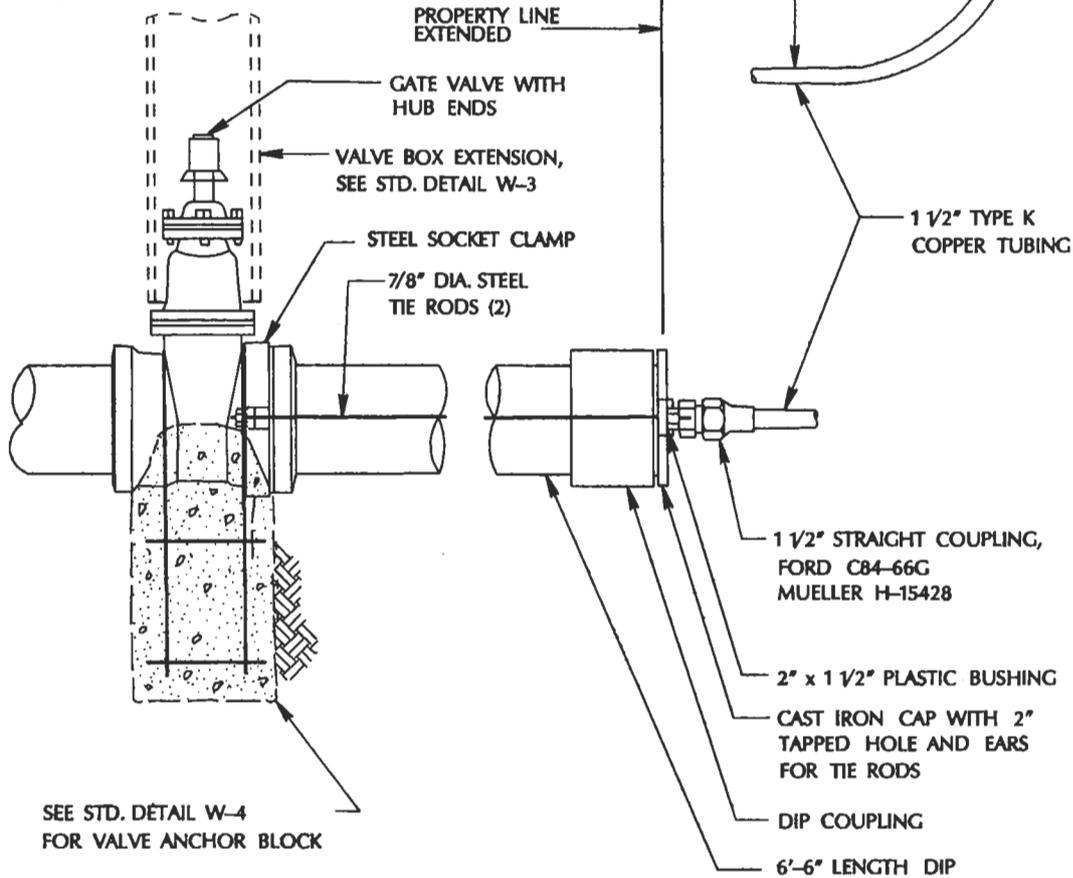
BRONZE 1 1/2"-90° ELBOW,
FLANGE x FEMALE I.P. WITH
BRASS PLUG.

1 1/2" ANGLE STOP WITH LOCKWINGS;
MUELLER H-14277
OR FORD FV43-666WG.

ATTACHED
SIDEWALK



- NOTES:** 1. WRAP TIE RODS, STRAIGHT COUPLING AND 5' OF COPPER TUBING WITH 10 MIL. PVC TAPE, HALF-LAPPED.
2. ENCASE ALL BURIED IRON SURFACES WITH POLYETHYLENE WRAP(8 MIL. MIN.) AS SPECIFIED IN A.W.W.A. C105.
3. ALTERNATE BLOW OFF ASSEMBLY SHALL INCLUDE AN MJ VALVE WITH MEGA LUGS AND MJ CAP WITH MAGA LUGS



APPROVED BY

Wsh

DATE

4-2-92

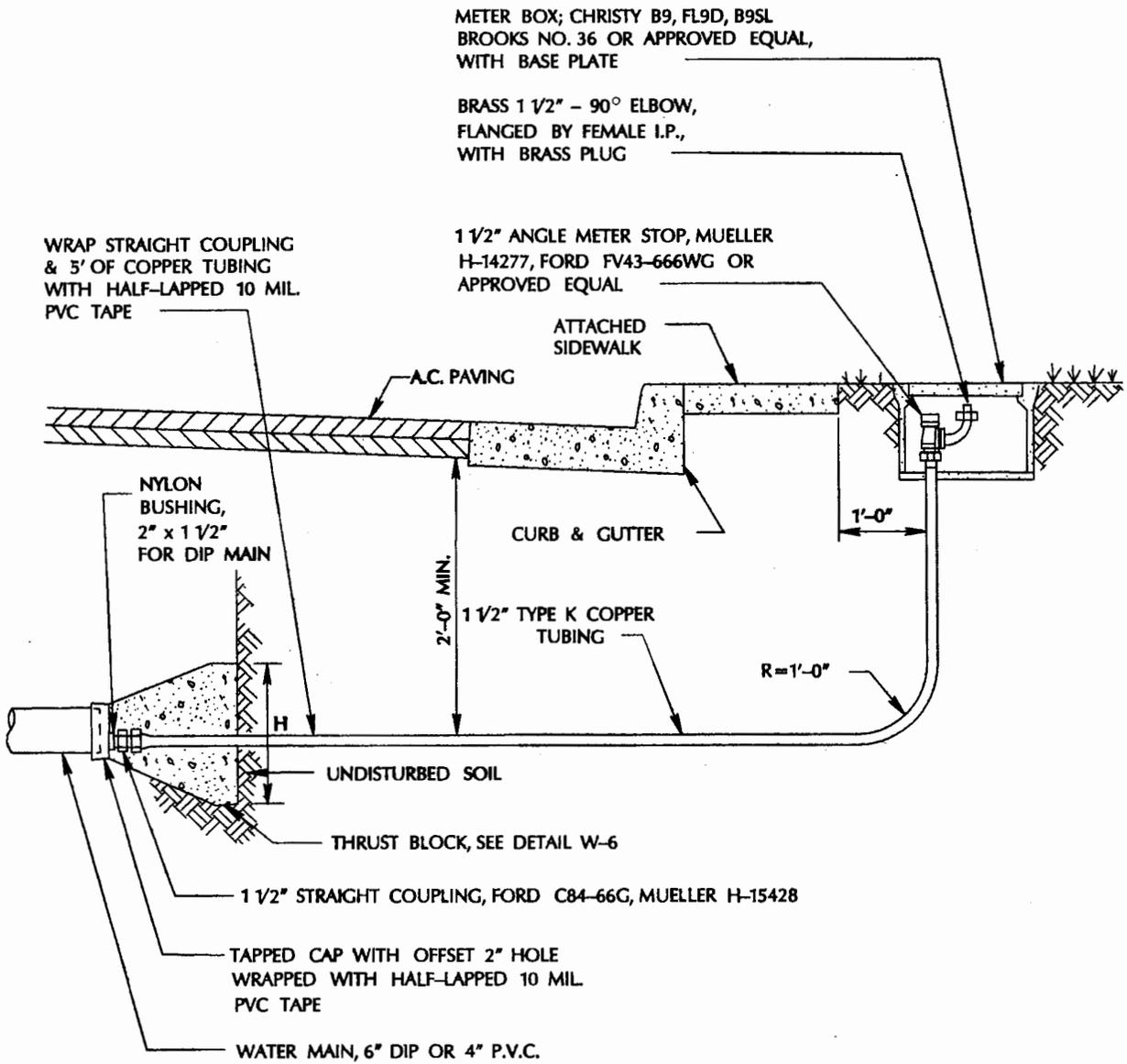
GATE VALVE BLOW-OFF ASSEMBLY

DEPARTMENT OF PUBLIC WORKS



DRAWING
NO.

W-10



DIMENSIONS

PIPE SIZE	200 PSI TEST		250 PSI TEST	
	W	H	W	H
4"	2'-0"	1'-0"	2'-6"	1'-0"
6"	3'-0"	1'-0"	3'-6"	1'-0"
8"	2'-6"	2'-0"	3'-0"	2'-0"
10"	3'-0"	3'-0"	3'-6"	3'-0"
12"	4'-0"	3'-0"	5'-0"	3'-0"
14"	4'-0"	4'-0"	5'-0"	4'-0"
18"	6'-6"	4'-0"	8'-0"	4'-0"

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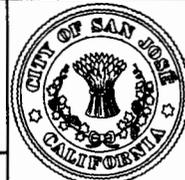
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CUL-DE-SAC BLOW-OFF ASSEMBLY

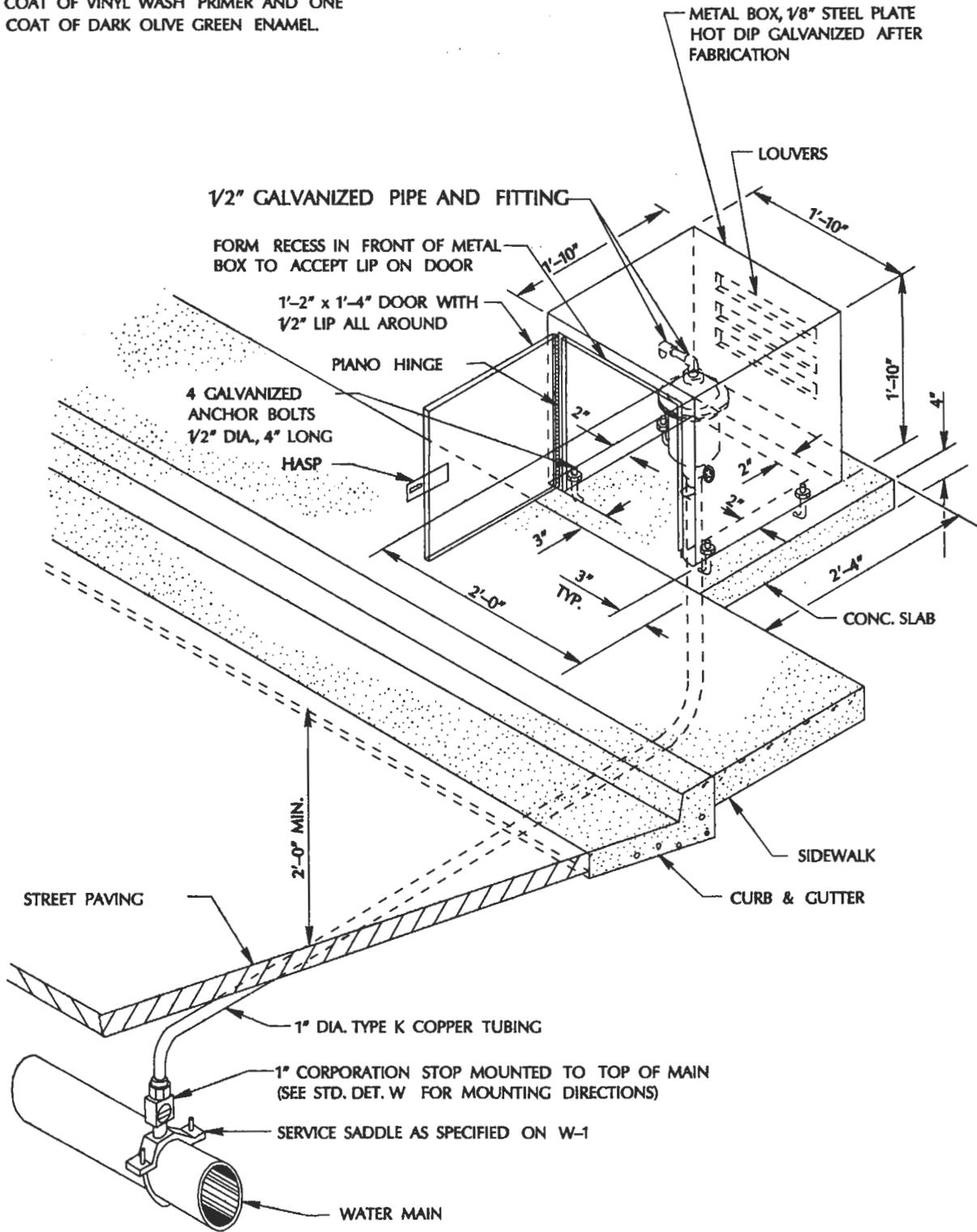
DEPARTMENT OF PUBLIC WORKS



DRAWING
NO.

W-11

NOTE: PAINT METAL BOX AND DOOR, BOTH INSIDE AND OUTSIDE, WITH ONE COAT OF VINYL WASH PRIMER AND ONE COAT OF DARK OLIVE GREEN ENAMEL.



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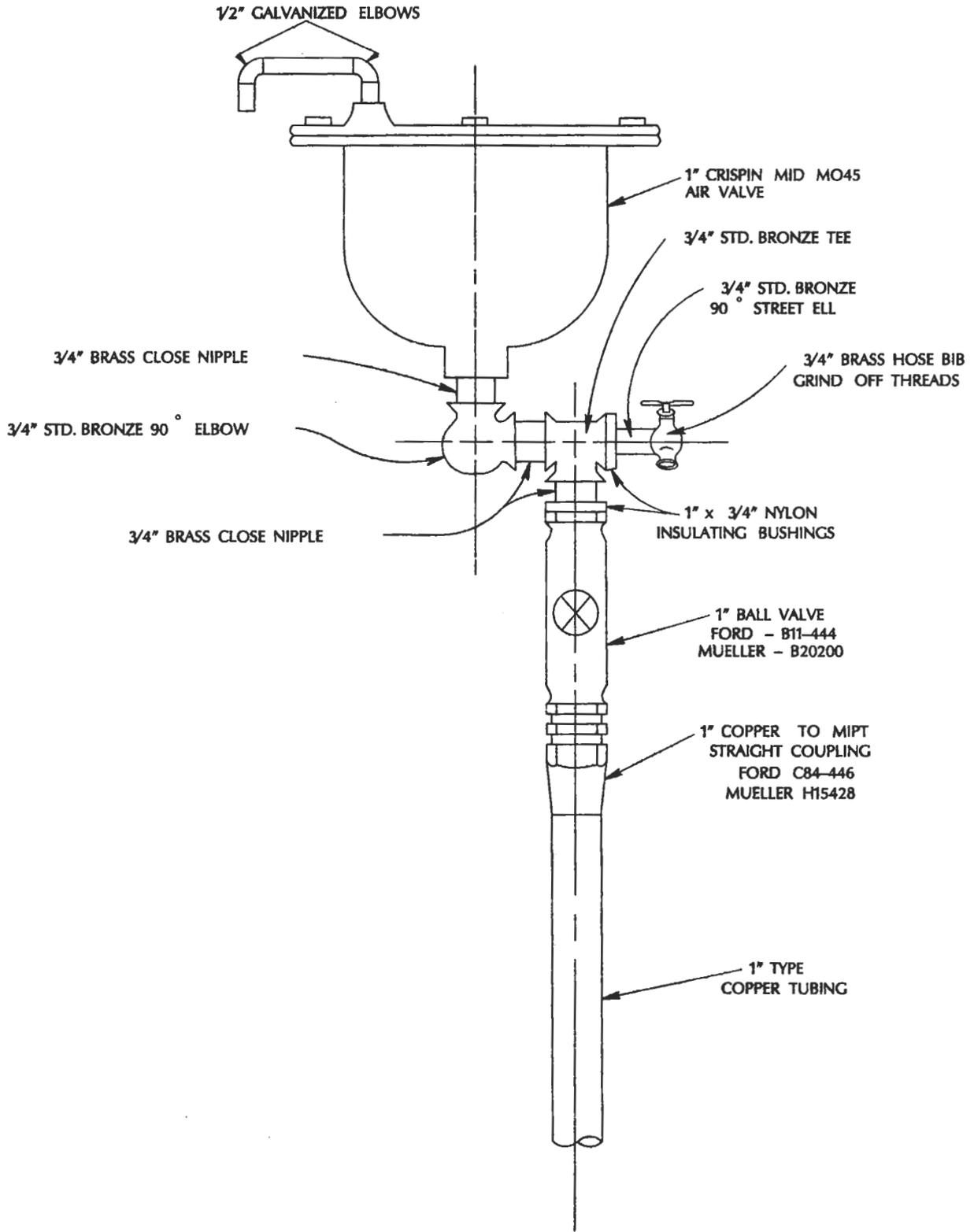
DATE
[Date]

AIR RELIEF VALVE & SAMPLING STATION ASSEMBLY

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
W-12



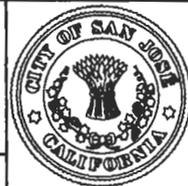
DETAIL - SAMPLING STATION

APPROVED BY
W-36

DATE
12/16/91

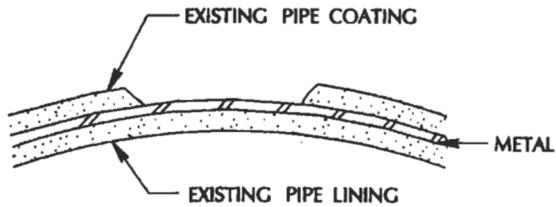
**AIR RELIEF VALVE & SAMPLING
STATION ASSEMBLY**

DEPARTMENT OF PUBLIC WORKS

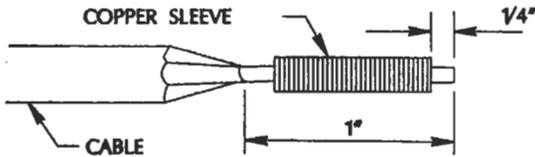


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W-12a

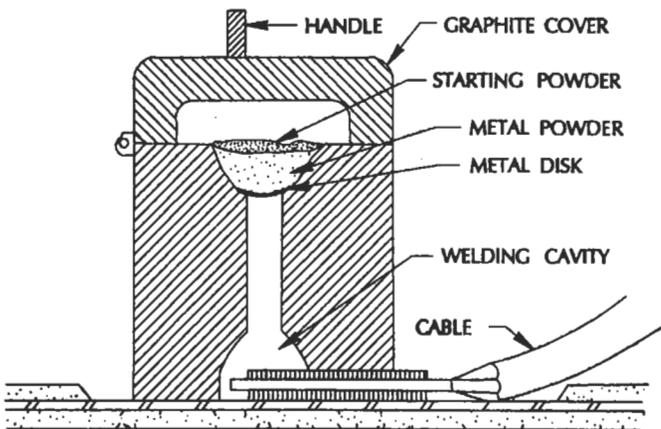
WELDING INSTRUCTIONS



STEP 1



STEP 2



STEP 3



STEP 4

STEP 1

REMOVE EXISTING COATING AND CLEAN PIPE TO WHITE METAL WITH FILE GRINDER OR METAL RASP.

STEP 2

REMOVE INSULATION, SLIP ON COPPER SLEEVE AND CRIMP.

STEP 3

INSTALL CABLE AS SHOWN. PLACE POWDER IN MOLD AND CLOSE COVER. IGNITE WITH FLINT GUN AND HOLD WELD MOLD IN POSITION FOR 10 SECONDS.

STEP 4

REMOVE SLAG AND TEST WELD WITH SHARP HAMMER BLOW. REPLACE COATING ON MAIN & COAT WELD AND BARE COPPER WITH 1/4" MIN. COATING OF SAME MATERIAL OR WITH 10 MIL PVC TAPE, HALF- LAPPED.

WELDING SPECIFICATIONS

CADWELD

CONDUCTOR- #10 OR #12 SOLID	STEEL OR DUCTILE IRON	CAST IRON
WELDER	CAM-108	CAHBA-1G
SLEEVE	CA-26180	CA-26180
CARTRIDGE	CA15-F33	CA25-XF19
CONDUCTOR- #8 STRANDED	STEEL OR DUCTILE IRON	CAST IRON
WELDER	CAM-109S	CAHBA-1L
SLEEVE	CAS-421	CAS-421
CARTRIDGE	CA15-F33	CA45-X519

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Wsk

DATE

4-2-92

**CABLE TO PIPE
EXOTHERMIC WELD**

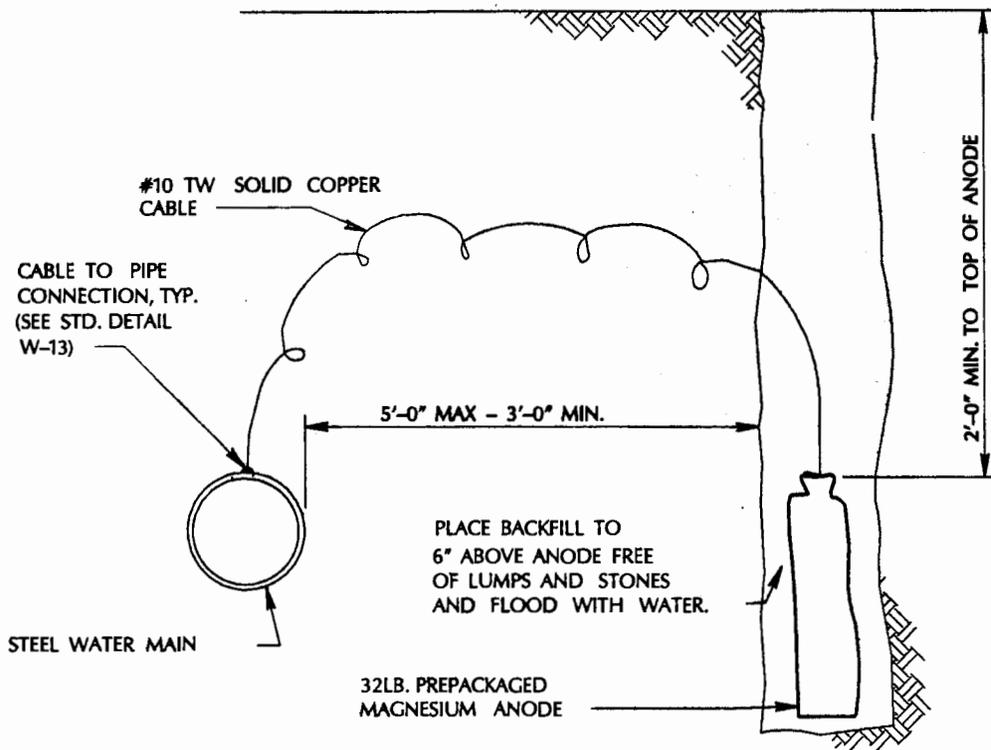
DEPARTMENT OF PUBLIC WORKS



DRAWING
NO.

W-13

- NOTES:**
1. ANODE TO BE INSTALLED WITH EVERY SERVICE CONNECTION (STD. DETAIL W-1) ON STEEL MAIN NOT UNDER CATHODIC PROTECTION (SEE ENGINEER).
 2. LEAVE ENOUGH SLACK IN CABLE TO PREVENT DAMAGE DURING BACKFILL OPERATIONS.
 3. ANODE MAY BE INSTALLED HORIZONTALLY IF LOCATED BELOW THE SPRINGLINE OF THE PIPE.



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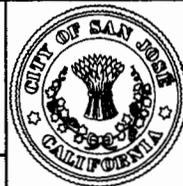
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DATE

Handwritten date

MAGNESIUM ANODE INSTALLATION

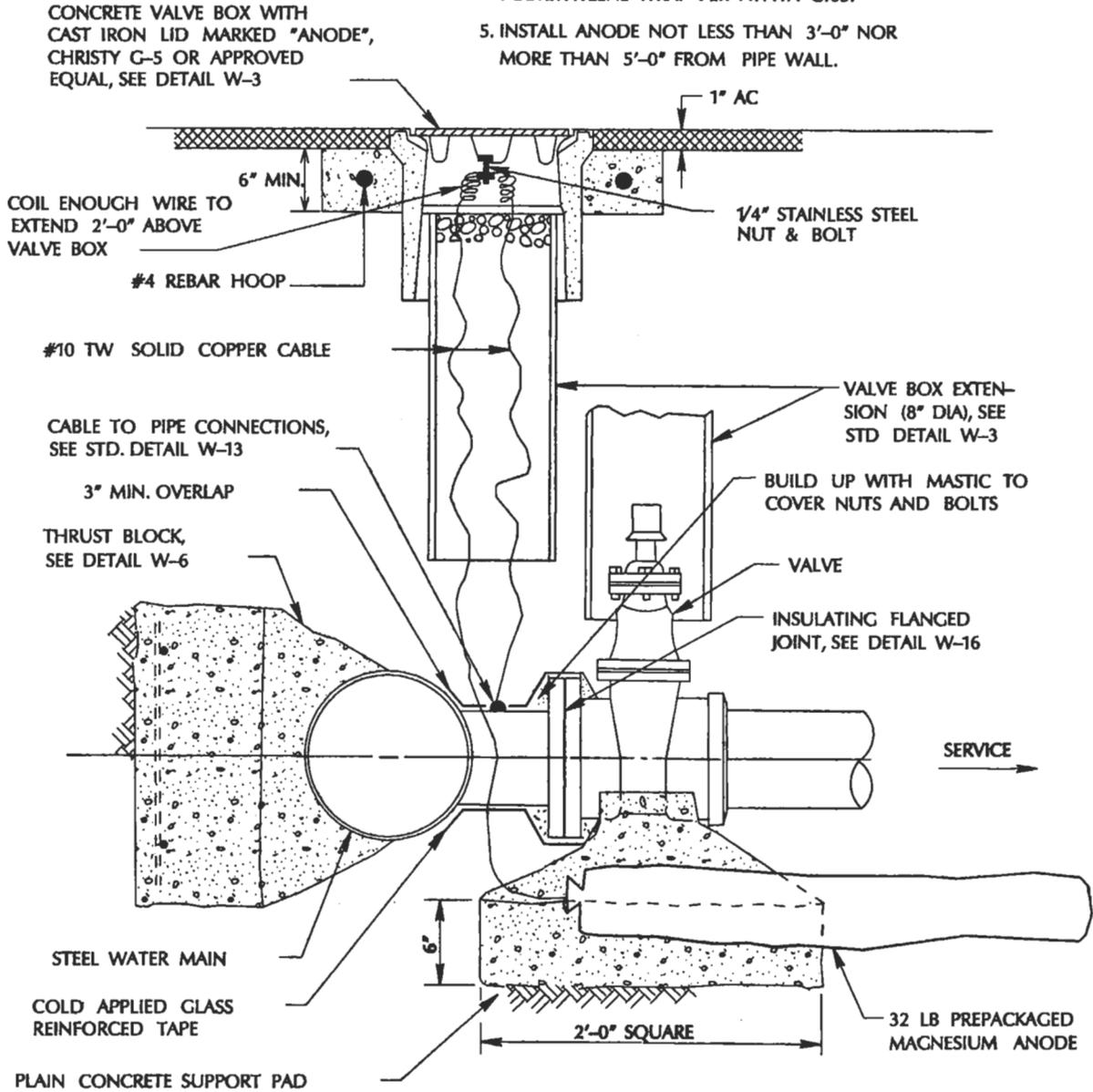
DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

W-14

- NOTES:**
1. ANODE MAY BE INSTALLED HORIZONTALLY BELOW THE SPRINGLINE OF THE PIPE OR VERTICALLY WITH 2'-0" MIN. COVER.
 2. PLACE BACKFILL TO 6" ABOVE ANODE FREE OF LUMPS OR STONES AND FLOOD WITH WATER.
 3. LEAVE ENOUGH SLACK IN CABLE TO PREVENT DAMAGE DURING BACKFILL OPERATIONS.
 4. ENCASE ALL METAL PIPE WITH MIN. 8 MIL POLYETHYLENE WRAP PER AWWA C105.
 5. INSTALL ANODE NOT LESS THAN 3'-0" NOR MORE THAN 5'-0" FROM PIPE WALL.



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Wash

DATE

11-2-73

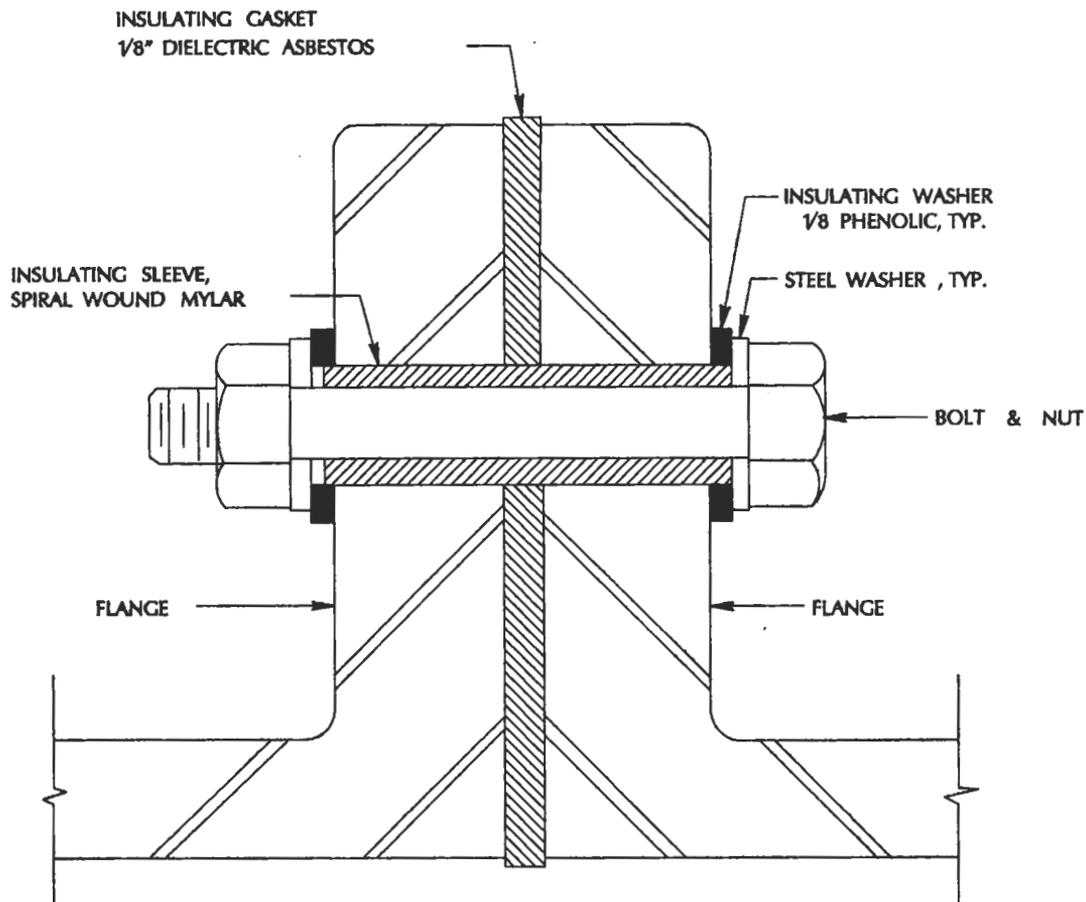
INSULATED OUTLET

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

W-15



APPROVED BY

W.S.H.

DATE

4-16-92

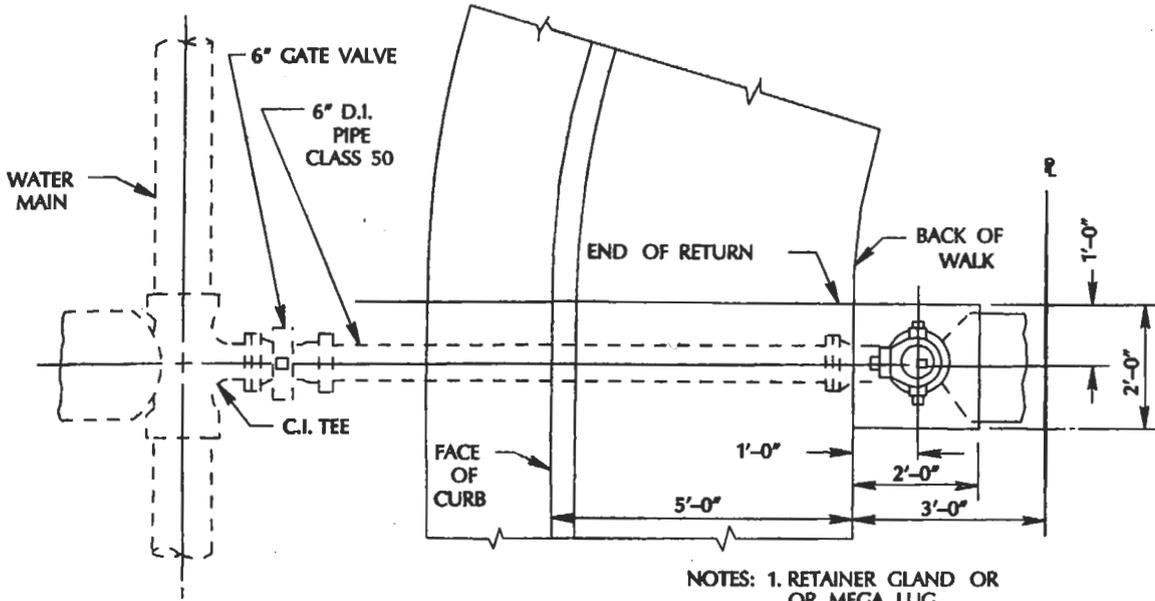
INSULATING FLANGED JOINT

DEPARTMENT OF PUBLIC WORKS



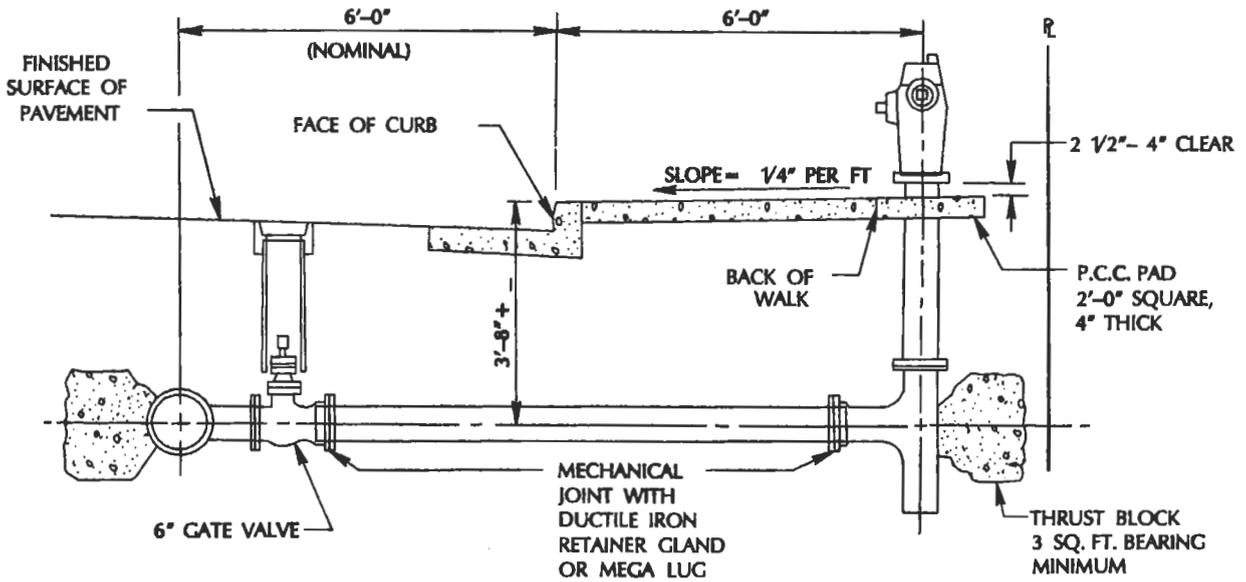
DRAWING
NO.

W-16



PLAN

- NOTES: 1. RETAINER GLAND OR OR MEGA LUG INSTALLED IF HYDRANT TEE THRUST BLOCK IS BEARING ON DISTURBED SOIL.
 2. ALL FIRE HYDRANTS SHALL BE DRY BARREL.



PROFILE

- NOTE: 3. ENCASE ALL BURIED METALLIC SURFACES WITH POLYETHYLENE WRAP PER AWWA STD. C105 (8 MIL. MIN.)
 4. C900 PVC CAN BE SUBSTITUTED FOR DIP.

APPROVED BY

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DATE

4-2-92

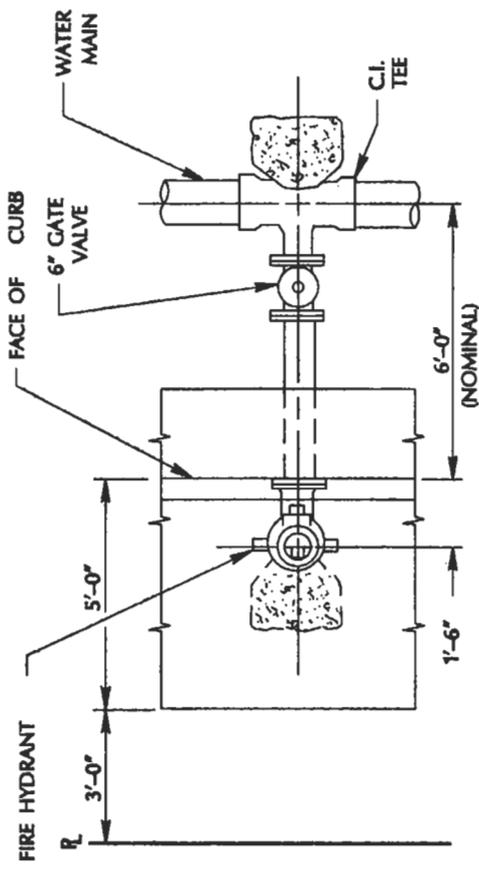
**ATTACHED RESIDENTIAL SIDEWALK
 FIRE HYDRANT INSTALLATION-
 END OF RETURN**

DEPARTMENT OF PUBLIC WORKS

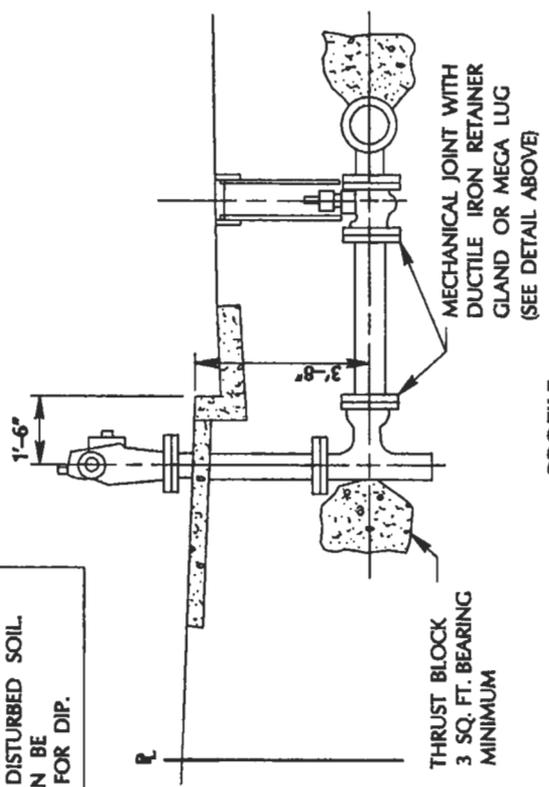


DRAWING NO.

W-17

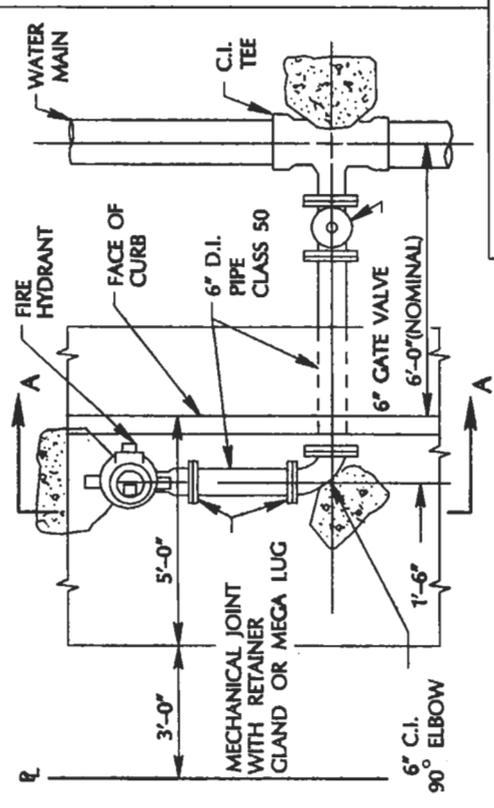


PLAN

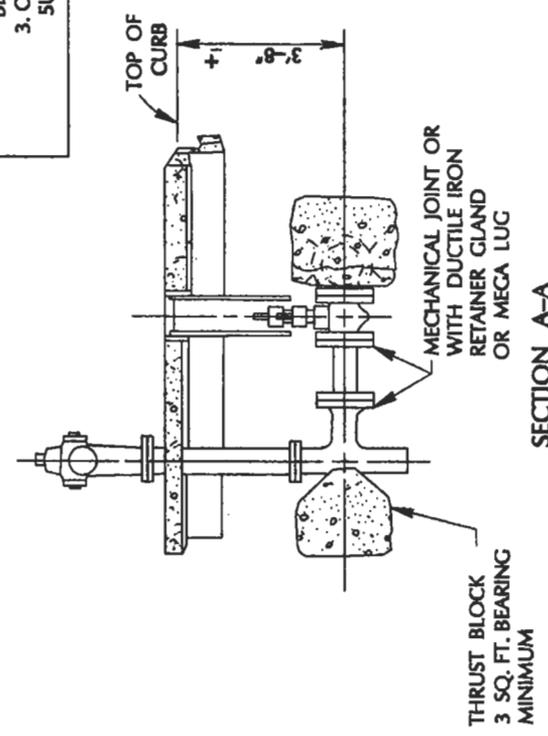


PROFILE

STRAIGHT LATERAL



PLAN



SECTION A-A

OFFSET LATERAL

NOTES:
 1. ENCASE ALL BURIED METALLIC SURFACES WITH POLYETHYLENE WRAP PER AWWA STD. C105 (8 MIL. MIN.)
 2. RETAINER GLAND OR MEGA LUG TO BE INSTALLED IF HYDRANT TEE THRUST BLOCK IS BEARING ON DISTURBED SOIL. C900 PVC CAN BE SUBSTITUTED FOR DIP.

APPROVED BY
 DATE

**ATTACHED RESIDENTIAL SIDEWALK
 FIRE HYDRANT
 INSTALLATION-MID BLOCK**
 DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
W-18

ELECTRICAL

SIGNALS

&

LIGHTING

STANDARD NOTES

- AB ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.
- BC INSTALL PULL BOX IN EXISTING CONDUIT RUN.
- CB INSTALL CONDUIT INTO EXISTING PULL BOX.
- CC CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED.
- CF CONDUIT TO REMAIN FOR FUTURE USE. REMOVE CONDUCTORS.
- DH INSTALL PULL WIRE OR ROPE.
- DH DETECTOR HANDHOLE. TYPE A, UNLESS OTHERWISE SPECIFIED.
- PEC PHOTOELECTRIC CONTROL.
- RL RELOCATE EQUIPMENT.
- RR REMOVE AND REUSE EQUIPMENT.
- RS REMOVE AND SALVAGE EQUIPMENT.
- SC SPlice NEW TO EXISTING CONDUCTORS.
- TSP TELEPHONE SERVICE POINT.
- RI REMOVE EXISTING CONDUCTORS. INSTALL NEW CONDUCTORS AS INDICATED.

ABBREVIATIONS

C	SUPPLIED AND INSTALLED BY CONTRACTOR, UNLESS SPECIFIED OTHERWISE.
CSJ	INSTALLED BY CITY
DLC	LOOP DETECTOR LEAD IN CABLE
E	EXISTING TO REMAIN
EMS	EXTINGUISHABLE MESSAGE SIGN
FB	FLASHING BEACON
HPS	HIGH PRESSURE SODIUM
COM	TRAFFIC SIGNAL COMMUNICATIONS CABLE
LPS	LOW PRESSURE SODIUM
MT	CONDUIT WITH PULL WIRE OR ROPE
PB	PULL BOX
PEC	PHOTOELECTRIC CONTROL
PED	PEDESTRIAN
PEU	PHOTOELECTRIC UNIT
PPB	PEDESTRIAN PUSH BUTTON
PT	POST TOP
R	REMOVE (TO BECOME PROPERTY OF CONTRACTOR)
SN	SOLID NEUTRAL
S	SALVAGE (DELIVER TO CSJ AS DIRECTED BY THE ENGINEER)
SP	SERVICE POINT
UNO	UNLESS NOTED OTHERWISE
USO	UNLESS SPECIFIED OTHERWISE
WP	WEATHER PROOF
XFMR	TRANSFORMER

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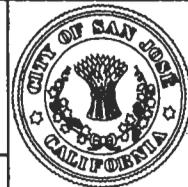
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3/3/92

TRAFFIC SIGNAL AND STREETLIGHTING NOTES AND ABBREVIATIONS

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-01a

STREETLIGHT LEGEND			
LUMINAIRE SYMBOL	LAMP DESIGNATION	LUMINAIRE I.E.S./ANSI LIGHT DISTRIBUTION DESIGNATIONS	LAMP WATTAGE & TYPE
(A) (AP)	SOX 18		18 WATT LPS
(B) (BP)	SOX 35		35 WATT LPS
(C) (CP)	SOX 55	TYPE III, SHORT, NON-CUTOFF	55 WATT LPS
(D) (DP)	SOX 90	TYPE IV, MEDIUM, SEMI-CUTOFF	90 WATT LPS
(E) (EP)	SOX 135	TYPE IV, MEDIUM, SEMI-CUTOFF	135 WATT LPS
(F) (FP)	SOX 180	TYPE IV, MEDIUM, SEMI-CUTOFF	180 WATT LPS
(M) (MP)	LU 50	TYPE III, MEDIUM, SEMI-CUTOFF	50 WATT HPS
(Q) (QP)	LU 70	TYPE III, MEDIUM, SEMI-CUTOFF	70 WATT HPS
(U) (UP)	LU 100	TYPE III, MEDIUM, SEMI-CUTOFF	100 WATT HPS
(V) (VP)	LU 310	TYPE III, MEDIUM, SEMI-CUTOFF	310 WATT HPS
(W) (WP)	LU 150	TYPE III, MEDIUM, SEMI-CUTOFF	150 WATT HPS
(X) (XP)	LU 250	TYPE III, MEDIUM, SEMI-CUTOFF	250 WATT HPS
(Y) (YP)	LU 400	TYPE III, MEDIUM, SEMI-CUTOFF	400 WATT HPS
(Z)	FLUORESCENT		

NOTES:

1. LETTER "P" IN SYMBOL INDICATES THAT A NEMA TWIST-LOCK RECEPTACLE, RATED 15A WITH PHOTOELECTRIC CONTROL DEVICE SHALL BE PROVIDED.
2. ALL BALLASTS SHALL BE OF MULTIPLE VOLTAGE TYPE.
3. ALL HPS LAMPS SHALL BE DESIGNED FOR "BASE DOWN" (BO) OR "ANY POSITION" OPERATION.
4. LU 100 AND LU 150 LAMPS SHALL BE 55V TYPE.
5. BALLAST POWER FACTOR SHALL EXCEED .90.
6. BALLASTS SHALL BE MOUNTED ON TRAY OR ACCESS DOOR.

APPROVED BY

Acw

DATE

3/3/92

STREETLIGHTING LEGEND

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

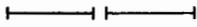
E-01b

TO BE CONST.

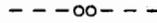
EXISTING

REMOVE, SALVAGE
OR RELOCATE

DESCRIPTION



ELECTRICAL CONDUIT



OVERHEAD CONDUCTORS



PULL BOX



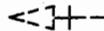
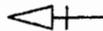
REPLACE EXISTING BOX WITH NEW BOX.
SIZE AS SPECIFIED.



UTILITY POLE



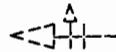
TRAFFIC SIGNAL OR STREETLIGHT
STANDARD



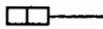
12" RED, YELLOW AND GREEN TRAFFIC
SIGNAL HEAD WITH BACKPLATE



8" RED, YELLOW AND GREEN TRAFFIC
SIGNAL HEAD WITH BACKPLATE



12" RED ARROW, YELLOW ARROW AND
GREEN ARROW TRAFFIC SIGNAL HEAD
WITH BACKPLATE



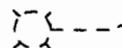
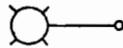
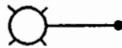
PEDESTRIAN SIGNAL FACE



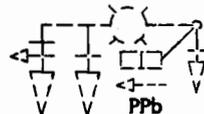
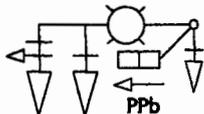
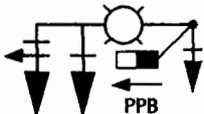
PEDESTRIAN PUSH BUTTON (ARROW
ON SIGN PLATE AS SHOWN)



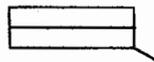
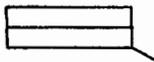
LUMINAIRE



STREETLIGHT STANDARD WITH MAST
ARM AND LUMINAIRE (ELECTROLIER)



TRAFFIC SIGNAL STANDARD WITH
LUMINAIRE, MAST ARMS AND
SIGNAL HEADS



INDUCTIVE DETECTOR LOOP



TRAFFIC SIGNAL CONTROLLER
CABINET (DOOR SWING AS SHOWN)



ELECTRICAL SERVICE CABINET
(DOOR SWING AS SHOWN)



TRAFFIC SIGNAL COMMUNICATIONS
CABLE



DETECTOR LOOP LEAD-IN CABLE

APPROVED BY

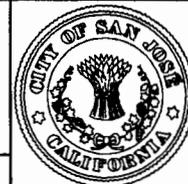
AWJ

DATE

3/2/92

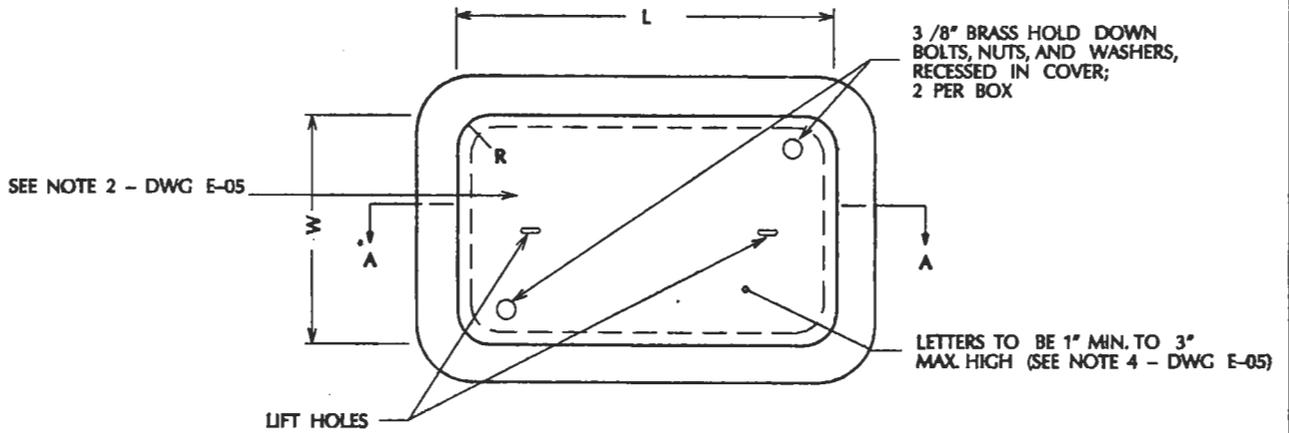
**TRAFFIC SIGNAL AND
STREETLIGHTING LEGEND**

DEPARTMENT OF PUBLIC WORKS

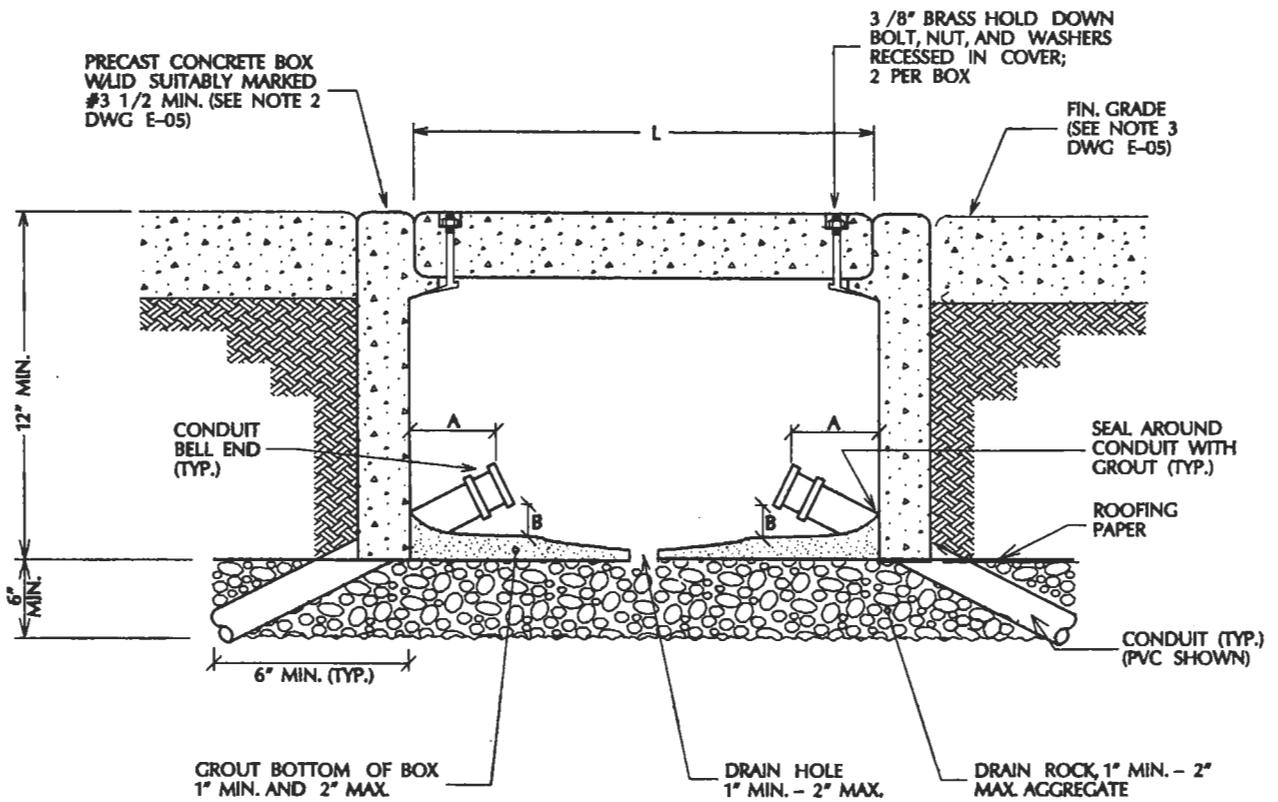


DRAWING
NO.

E-01c



TOP VIEW



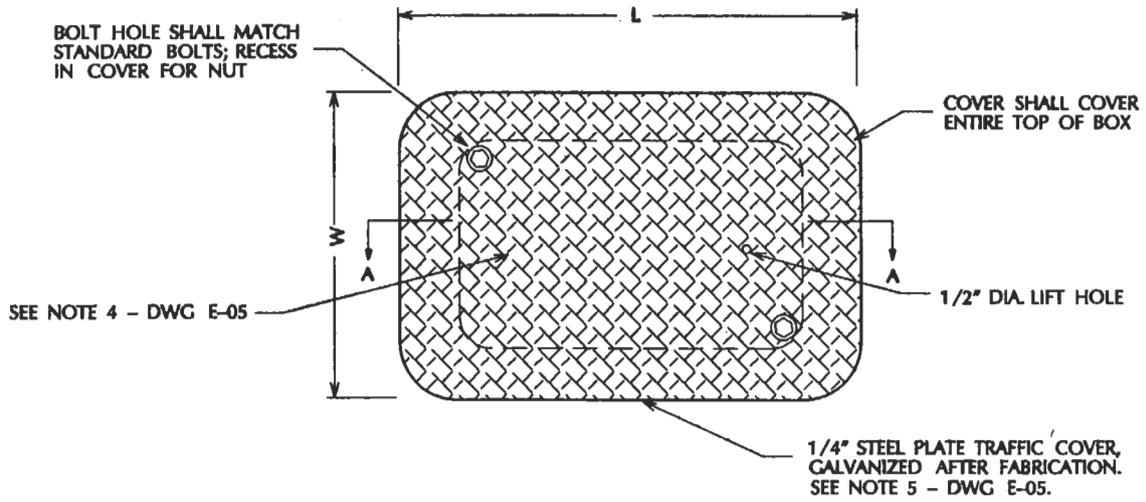
SECTION A - A

DIMENSION A: 1" MIN., 2" MAX. (TYP. - ALL CONDUITS)
 B: 1" MIN., 2" MAX. ABOVE GROUT (TYP. - ALL CONDUITS)

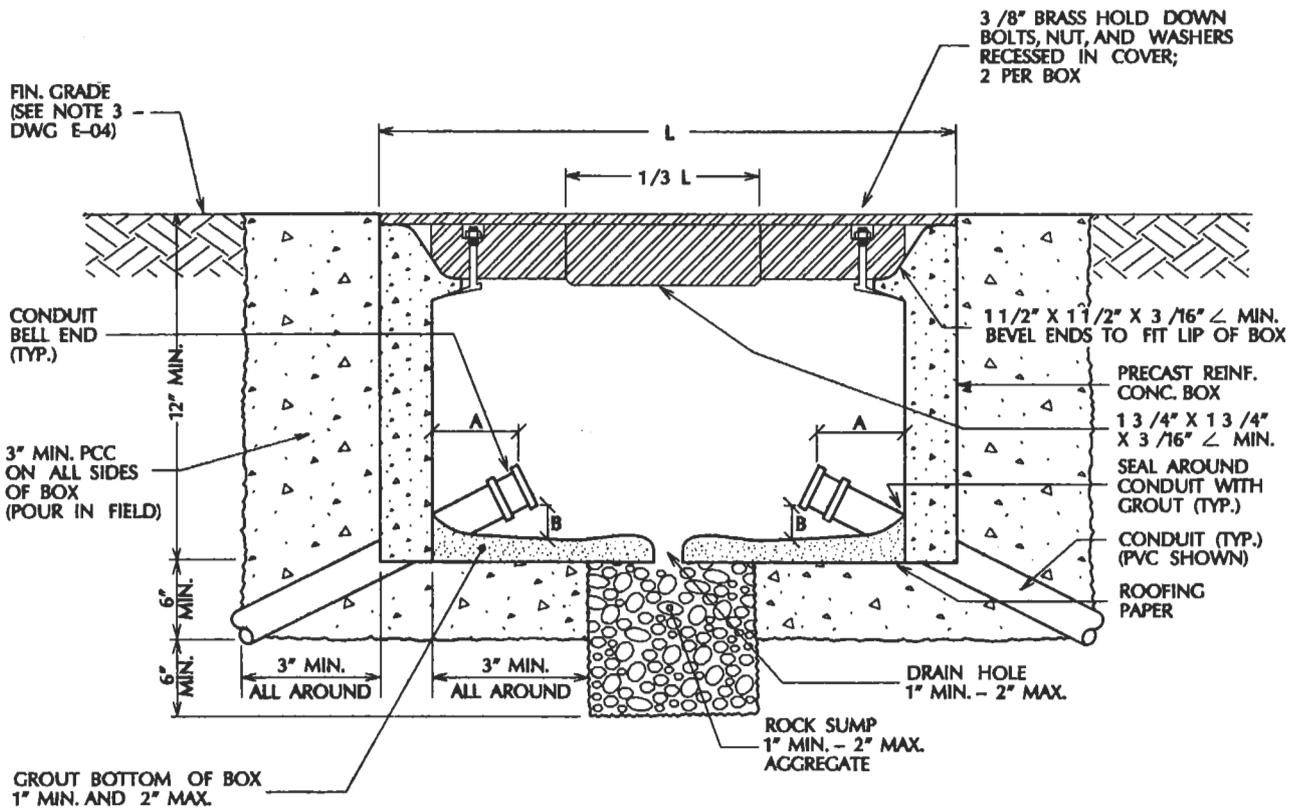
NOTES:
 APPLICATION: PLACED IN CONDUIT RUNS IN AREAS WHERE BOX IS NOT SUBJECT TO VEHICULAR TRAFFIC LOAD.
 SEE DRAWINGS E-04, E-05, AND E-06 FOR PULL BOX DETAILS AND NOTES.

APPROVED BY 	CONCRETE PULLBOX NON-TRAFFIC		DRAWING NO.
DATE 3/3/92			E-02

DEPARTMENT OF PUBLIC WORKS



TOP VIEW



SECTION A - A

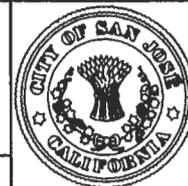
DIMENSION A: 1" MIN., 2" MAX. (TYP. - ALL CONDUITS)
 " B: 1" MIN, 2" MAX. ABOVE GROUT (TYP. - ALL CONDUITS)

NOTES:
 1. APPLICATION: PLACED IN CONDUIT RUNS IN AREAS WHERE BOX IS SUBJECT TO VEHICULAR TRAFFIC LOAD.
 2. SEE DRAWINGS E-04, E-05, AND E-06 FOR PULL BOX DETAILS AND NOTES.

APPROVED BY
[Signature]
 DATE
 3/3/92

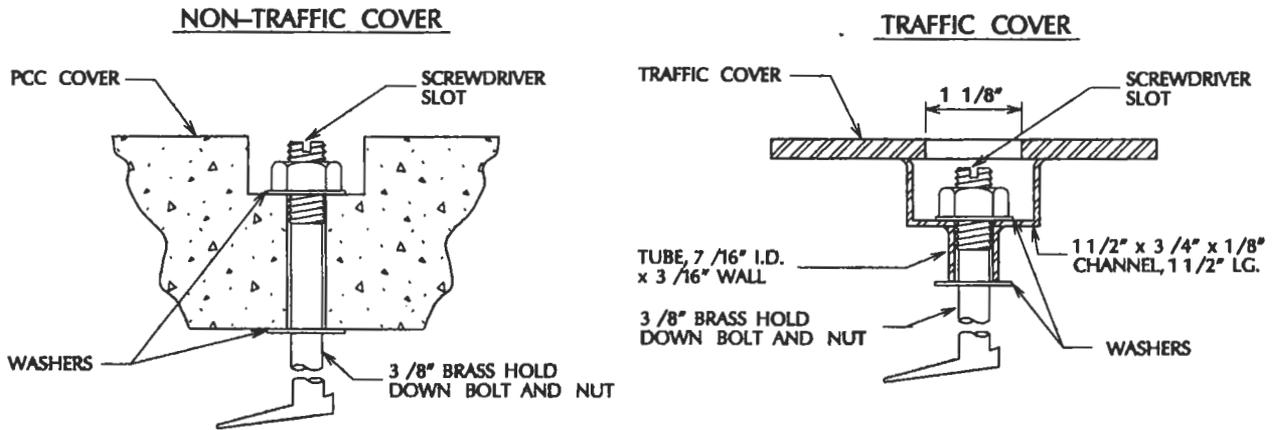
CONCRETE PULLBOX
 TRAFFIC

DEPARTMENT OF PUBLIC WORKS



DRAWING
 NO.
 E-03

HOLD DOWN BOLT DETAIL



DIMENSION TABLE

PULL BOX	CONCRETE BOX		CONCRETE COVER					TRAFFIC COVER			△ ROCK SUMP
	MIN. THICKNESS	MIN. DEPTH	L	W	R	EDGE THICKNESS	EDGE TAPER	L	W	PLATE THICKNESS	
NO. 3 1/2	1"	12"	15 3/8"	10 1/8"	1 1/8"	1 3/4"	1/8"	19 1/8"	14"	1/4"	1.8
NO. 5	1"	12"	23 1/4"	13 3/4"	1 1/4"	2"	1/8"	24 5/8"	15 1/8"	1/4"	2.6
NO. 6	1 1/2"	12"	30 5/8"	17 5/8"	1 1/4"	2"	1/8"	34 5/8"	21 7/8"	1/4"	5.3
NO. 7	1 1/2"	14"	35 3/4"	24"	1 1/4"	3"	1/8"	39 3/4"	28 1/8"	1/4"	7.7
NO. 8	1 1/2"	14"	47 3/4"	30 1/8"	1 1/4"	3"	1/8"	51 3/4"	33 5/8"	1/4"	12.2

△ = MINIMUM CUBIC FEET OF DRAIN ROCK FOR DRY WELL. DOES NOT APPLY TO TRAFFIC BOX. PROVIDE DRAIN ROCK FOR TRAFFIC BOX IN ACCORDANCE WITH DWG. E-03.

APPROVED BY

AWB

DATE

3/3/92

CONCRETE PULLBOX DETAILS AND DIMENSIONS

DEPARTMENT OF PUBLIC WORKS



DRAWING
NO.

E-04

1. USE STEEL COVER AND SPECIAL CONCRETE FOOTING, AS SHOWN, WHEN BOX IS APPROVED BY THE ENGINEER TO BE INSTALLED WHERE SUBJECT TO VEHICULAR TRAFFIC LOADS. STEEL COVER SHALL HAVE EMBOSSED NON-SKID PATTERN.
2. STEEL REINFORCING SHALL BE AS REGULARLY USED IN THE STANDARD PRODUCTS OF THE RESPECTIVE MANUFACTURER.
3. TOP OF PULL BOXES SHALL BE FLUSH WITH SURROUNDING GRADE, SIDEWALK, OR TOP OF ADJACENT CURB, EXCEPT THAT IN UNPAVED AREAS WHERE PULL BOX IS NOT IMMEDIATELY ADJACENT TO AND PROTECTED BY A CONCRETE FOUNDATION, POLE OR OTHER PROTECTIVE CONSTRUCTION, THE BOX SHALL BE PLACED WITH ITS TOP 0.10 FOOT ABOVE SURROUNDING GRADE. WHERE PRACTICABLE, PULL BOXES SHOWN IN THE VICINITY OF CURBS SHALL BE PLACED ADJACENT TO THE BACK OF CURB, AND PULL BOXES SHOWN ADJACENT TO STANDARDS SHALL BE PLACED IN ACCORDANCE WITH DETAIL E-14.
4. PULL BOX COVERS SHALL BE MARKED AS FOLLOWS:
 CSJ TRAFFIC SIGNAL: FOR TRAFFIC SIGNAL SYSTEMS WITH OR WITHOUT STREET LIGHTING SYSTEMS.
 CSJ STREETLIGHTING: FOR STREETLIGHTING SYSTEMS ONLY
 CSJ COMMUNICATION: FOR TRAFFIC SIGNAL COMMUNICATIONS SYSTEMS ONLY.
 CSJ TREE LIGHTING: FOR TREE LIGHTING SYSTEMS ONLY.
 CSJ SPRINKLER CONTROL: FOR SPRINKLER CONTROL SYSTEMS ONLY.
 CSJ COUNT STATION: FOR TRAFFIC COUNT STATION SYSTEMS ONLY.
 CSJ SERVICE: FOR SERVICE LATERALS TO UTILITY FACILITIES TERMINATION POINT ONLY.
 CSJ ELECTRICAL: FOR MISCELLANEOUS ELECTRICAL SYSTEMS ONLY.
5. ALL METAL COVERS, METAL Z-BAR FRAME, METAL RINGS OR ANY METALLIC COMPONENT OF A PULLBOX SHALL BE BONDED TO A #8 AWG OR LARGER COPPER EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS SHALL BE BRAIDED COPPER EQUIVALENT TO #8 AWG COPPER AND 36" IN LENGTH, MINIMUM, AND SHALL BE ATTACHED WITH 1/4" - 20 STAINLESS STEEL SCREW (DRILL AND TAP AS REQUIRED) AND APPROVED GROUNDING LUG.
6. THE NOMINAL DIMENSIONS OF THE OPENING IN WHICH THE COVER SETS SHALL BE THE SAME AS THE COVER DIMENSIONS EXCEPT THE LENGTH AND WIDTH DIMENSIONS SHALL BE 1/8" GREATER.
7. ALL COVERS AND BOXES SHALL BE INTERCHANGEABLE WITH CITY OF SAN JOSE MALE AND FEMALE GAGES. WHEN INTERCHANGED WITH A STANDARD MALE OR FEMALE GAGE, THE TOP SURFACES SHALL BE FLUSH WITHIN 1/8". TOP OUTSIDE EDGE OF ALL CONCRETE COVERS AND PULL BOXES SHALL HAVE A 1/4" MIN. RADIUS.
8. WHEN PULLBOX IS INSTALLED IN SIDEWALK AREA, THE DEPTH OF THE PULL BOX SHALL BE ADJUSTED SO THAT THE TOP OF THE BOX IS FLUSH WITH THE TOP OF THE SIDEWALK.
9. PULL BOX SHALL NOT BE INSTALLED WITHIN THE BOUNDARIES OF NEW OR EXISTING WHEELCHAIR RAMPS OR DRIVEWAYS.
10. ALL PULL BOXES SHALL BE LOCATED WITHIN CITY RIGHT-OF-WAY.
11. DRAIN ROCK CUSHION SHALL EXTEND A MIN. OF 6" BEYOND INSIDE WALLS OF NON-TRAFFIC BOX.
12. CONDUITS SHALL TERMINATE NOT MORE THAN 2" AND NOT LESS THAN 1" INSIDE THE BOX, AND SHALL BE NOT LESS THAN 1" NOR MORE THAN 2" CLEAR FROM THE GROUTED BOTTOM OF THE BOX.

APPROVED BY <i>AWB</i>	CONCRETE PULLBOX NOTES		DRAWING NO.
DATE <i>3/3/92</i>			E-05
DEPARTMENT OF PUBLIC WORKS			

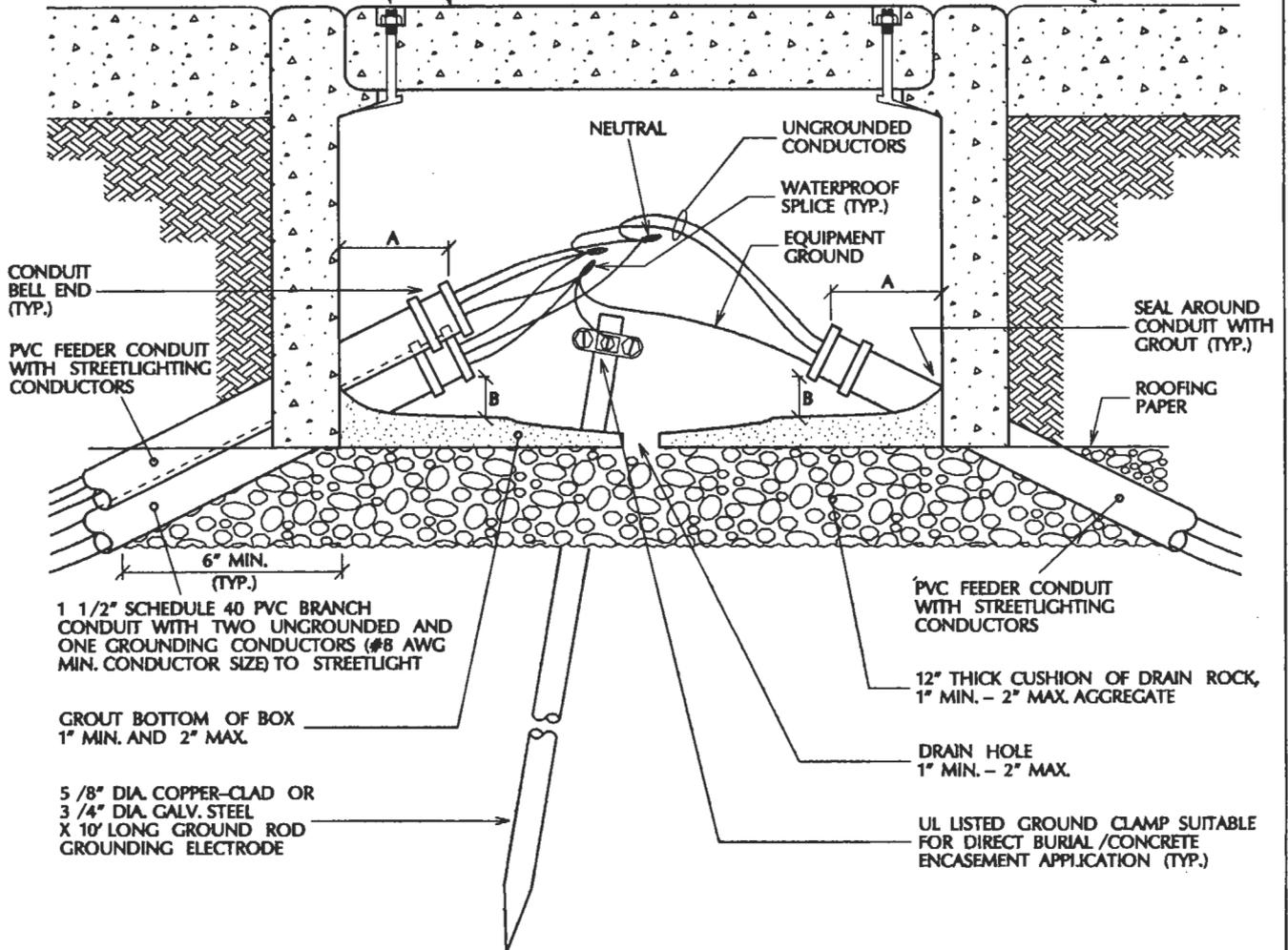
13. CONDUITS SHALL ENTER THE BOX WITH MANUFACTURED LONG RADII TYPE OR STANDARD 45° ELBOW.
14. FACTORY BOTTOM WITH 2" DRAIN HOLE IS ACCEPTABLE IN LIEU OF GROUTED BOTTOM AND ROOFING PAPER.
15. PULL BOX SHALL BE SIZE #3 1/2 MIN. UNLESS SHOWN OTHERWISE ON PLANS OR REQUIRED.
16. PULL BOXES SHALL BE PLACED AT INTERVALS NOT EXCEEDING 200 FEET IN CONDUIT RUNS.
17. INSTALL PULL BOX EXTENSION(S) AS REQUIRED TO SET TOP OF PULL BOX FLUSH WITH SURROUNDING GRADE.

APPROVED BY <i>aud</i>	CONCRETE PULLBOX NOTES - CONTINUED		DRAWING NO.
DATE <i>3/3/92</i>			E-06
DEPARTMENT OF PUBLIC WORKS			

CITY OF SAN JOSE #3 1/2
 PRECAST CONCRETE BOX WITH
 LID MARKED "CSJ STREETLIGHTING"

3/8" BRASS HOLD DOWN BOLT
 NUT AND WASHER RECESSED
 IN COVER (2 PER BOX)

SIDEWALK OR TOP
 OF CURB GRADE



1 1/2" SCHEDULE 40 PVC BRANCH
 CONDUIT WITH TWO UNGROUNDED AND
 ONE GROUNDING CONDUCTORS (#8 AWG
 MIN. CONDUCTOR SIZE) TO STREETLIGHT

GROUT BOTTOM OF BOX
 1" MIN. AND 2" MAX.

5/8" DIA. COPPER-CLAD OR
 3/4" DIA. GALV. STEEL
 X 10' LONG GROUND ROD
 GROUNDING ELECTRODE

PVC FEEDER CONDUIT
 WITH STREETLIGHTING
 CONDUCTORS

12" THICK CUSHION OF DRAIN ROCK,
 1" MIN. - 2" MAX. AGGREGATE

DRAIN HOLE
 1" MIN. - 2" MAX.

UL LISTED GROUND CLAMP SUITABLE
 FOR DIRECT BURIAL / CONCRETE
 ENCASEMENT APPLICATION (TYP.)

DIMENSION A: 1" MIN., 2" MAX. (TYP. - ALL CONDUITS)
 B: 1" MIN., 2" MAX. ABOVE GROUT (TYP. - ALL CONDUITS)

NOTES:

1. SEE NOTES DRAWINGS E-04, E-05, AND E-06.
2. PVC CONDUIT SHOWN; IF RIGID STEEL CONDUIT IS USED, BONDING SHALL BE AS PER CITY OF SAN JOSE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. SEE DRAWINGS E-46 AND E-47 FOR BONDING REQUIREMENTS.
4. PROVIDE 3' OF SLACK IN ALL CONDUCTORS IN ACCORDANCE WITH SPECIFICATIONS (SLACK NOT SHOWN).
5. 240V STREETLIGHTING CIRCUIT SHOWN. 120V STREETLIGHTING SIMILAR EXCEPT NEUTRAL CONDUCTOR IS PRESENT.

APPROVED BY

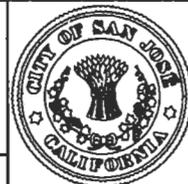
Ans

DATE

3/3/92

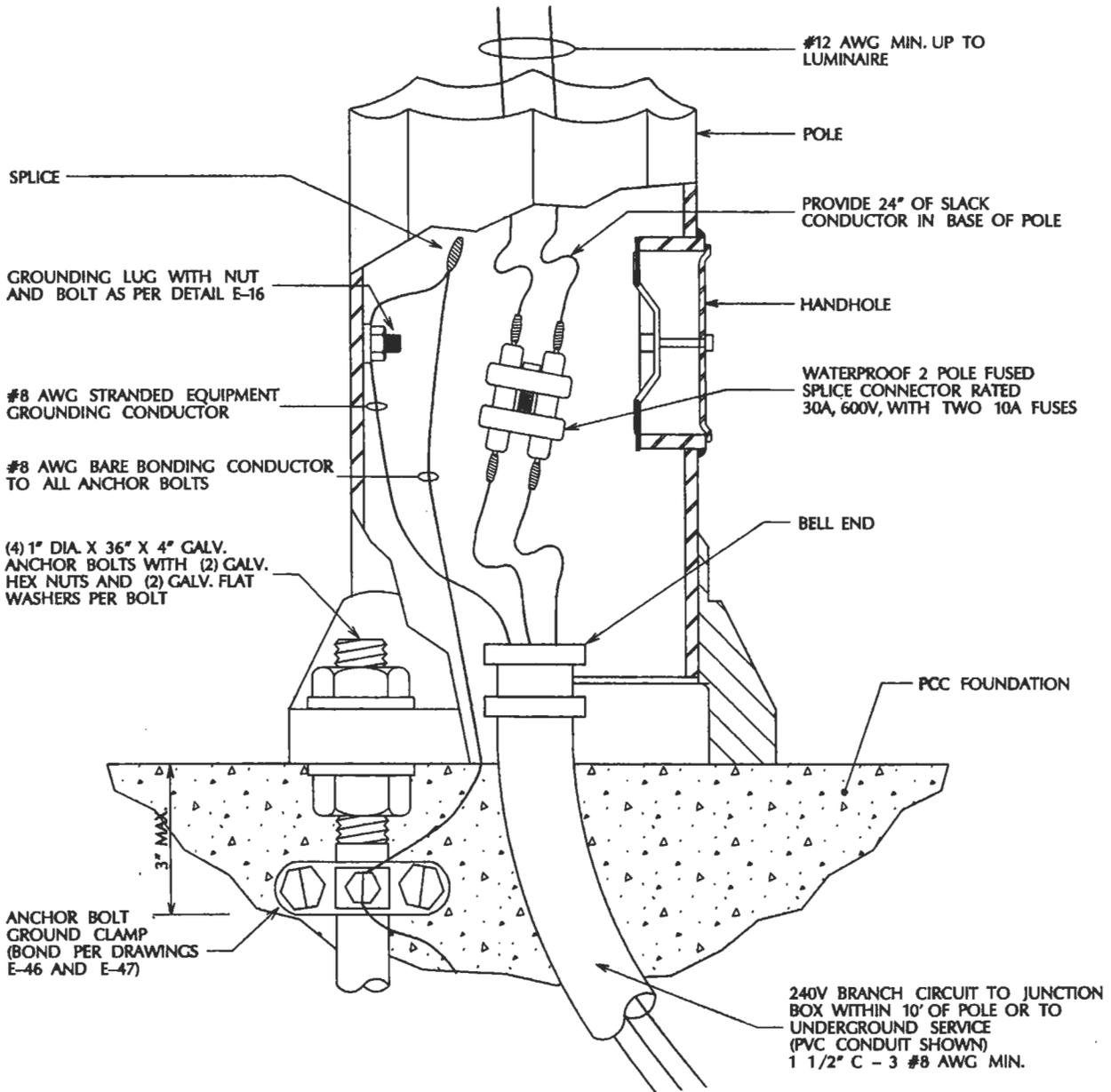
**STREETLIGHT - BRANCH CIRCUIT
 PULLBOX**

DEPARTMENT OF PUBLIC WORKS



DRAWING
 NO.

E-07



NOTES:

1. SEE DRAWINGS E-46 AND E-47 FOR POLE BONDING REQUIREMENTS.
2. 240V CIRCUIT SHOWN. 120V IS SIMILAR EXCEPT USE 1P FUSED CONNECTOR WITH ONE 10A FUSE, IN UNGROUNDED CIRCUIT CONDUCTOR, AND BOND GROUNDED CONDUCTOR TO GROUNDING CONDUCTOR.

APPROVED BY

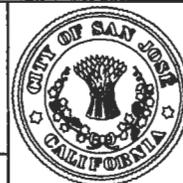
AWP

DATE

3/3/92

**STREETLIGHT - UNDERGROUND
BRANCH CIRCUIT CONNECTION**

DEPARTMENT OF PUBLIC WORKS



DRAWING
NO.

E-08

REMOVEABLE ORNAMENTAL
POLE TOP FINIAL

LPS LUMINAIRE
(WATTAGE AS SPECIFIED)

PHOTO-CONTROL OR
SHORTING CAP WITH LOCKING
RECEPTACLE AS REQUIRED

HPS LUMINAIRE
(WATTAGE AS SPECIFIED)

GALVANIZED MASTARM
(TYPE C-8 STANDARD)

STANDARD (TYPE 10-B, GALVANIZED
FINISH STANDARD)

POLE LABEL

GROUT

#3 1/2 PULL BOX

FINISH GRADE

HANDHOLE

P.C.C. FOUNDATION CAP

P.C.C. FOUNDATION

APPROVED BY

aws

DATE

3/3/92

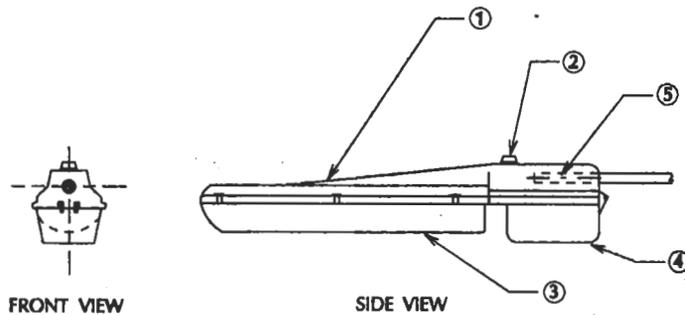
TYPICAL ELECTROLIER
LOW PRESSURE SODIUM
HIGH PRESSURE SODIUM

DEPARTMENT OF PUBLIC WORKS

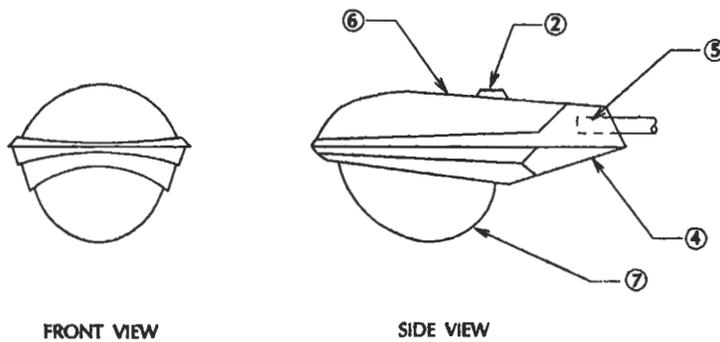


DRAWING
NO.

E-09



LOW PRESSURE SODIUM



HIGH PRESSURE SODIUM

NOTES:

- ① NON-CORROSIVE ABS PLASTIC HOUSING WITH U.V. INHIBITING KORADE FILM.
- ② EETI NEMA 3 PRONG PHOTOCONTROL WITH LOCKING RECEPTACLE OR SHORTING CAP AS REQUIRED
- ③ PRISMATIC ACRYLIC REFRACTOR WITH HIGH TEMPERATURE POLYESTER FIBER GASKET.
- ④ LATCHED AND HINGED DIE CAST ALUMINUM POWER POD ASSEMBLY WITH QUICK BALLAST DISCONNECT
- ⑤ INTERNAL FOUR BOLT SLIPFITTER ASSEMBLY ADJUSTABLE FOR 1 1/4" AND 2" MAST ARMS.
- ⑥ DIE CAST ALUMINUM HOUSING (UPPER AND LOWER SECTIONS)
- ⑦ PRISMATIC BOROSILICATE GLASS REFRACTOR WITH HIGH TEMPERATURE POLYESTER FIBER GASKET.

APPROVED BY

AWD

DATE

3/3/92

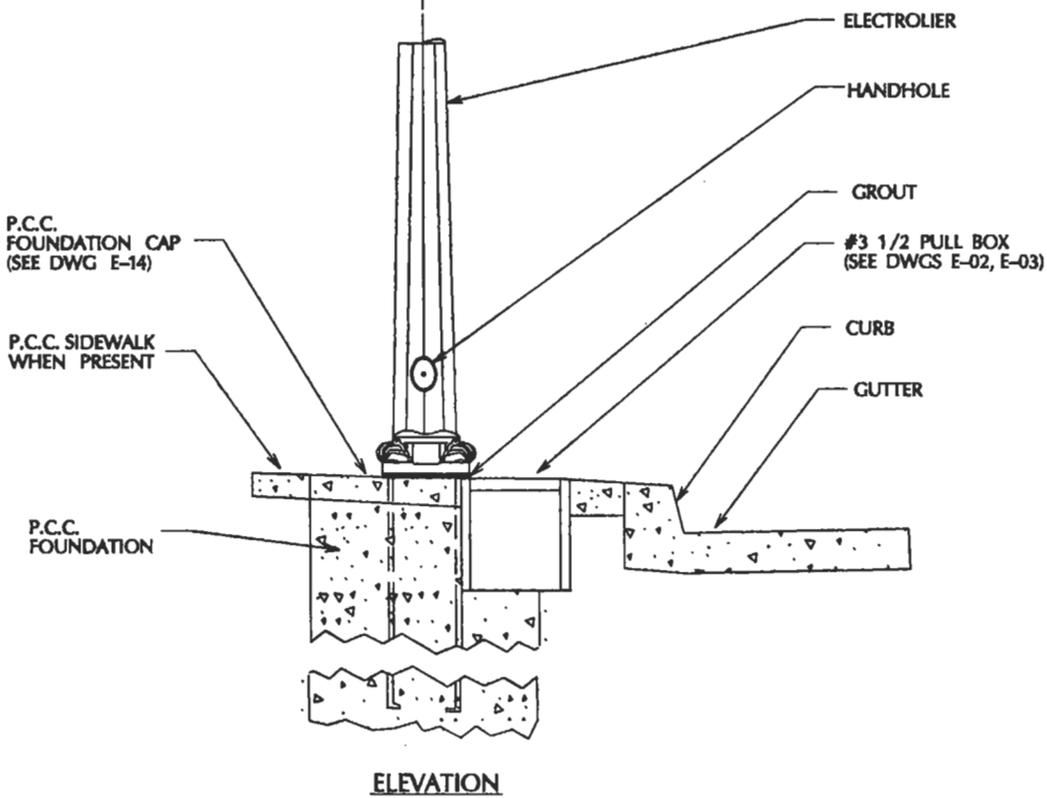
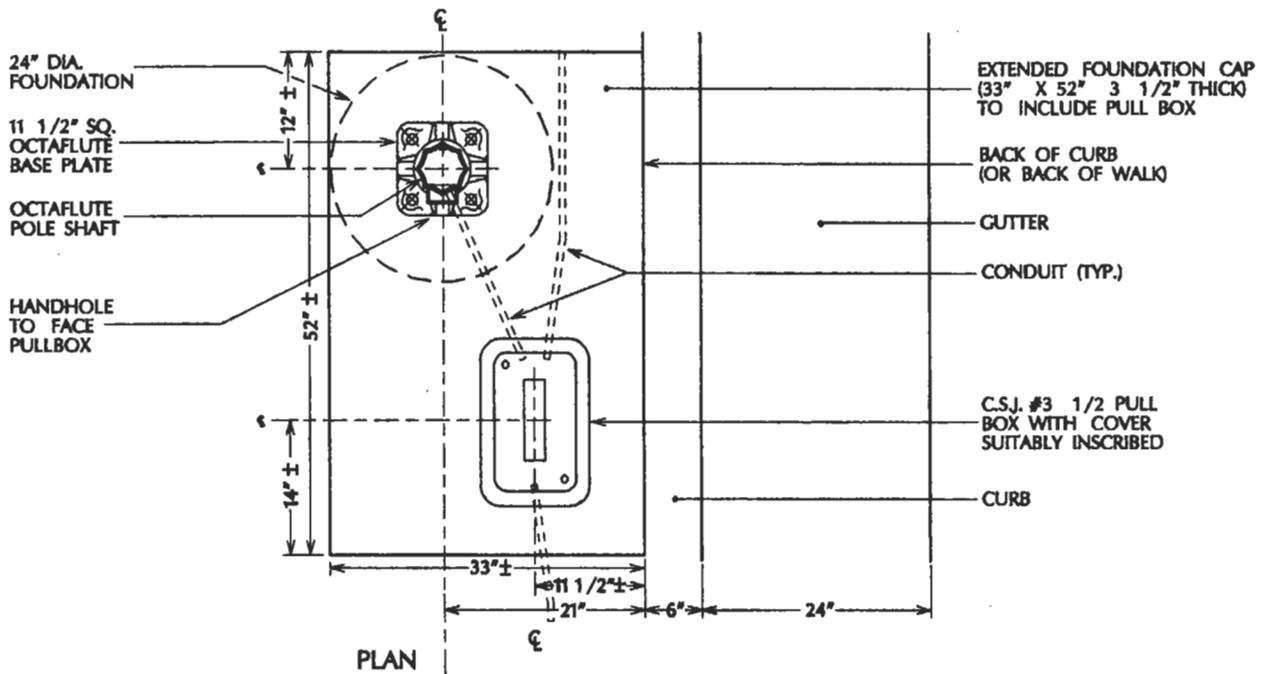
**TYPICAL LUMINARE
LOW PRESSURE SODIUM
HIGH PRESSURE SODIUM**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-10



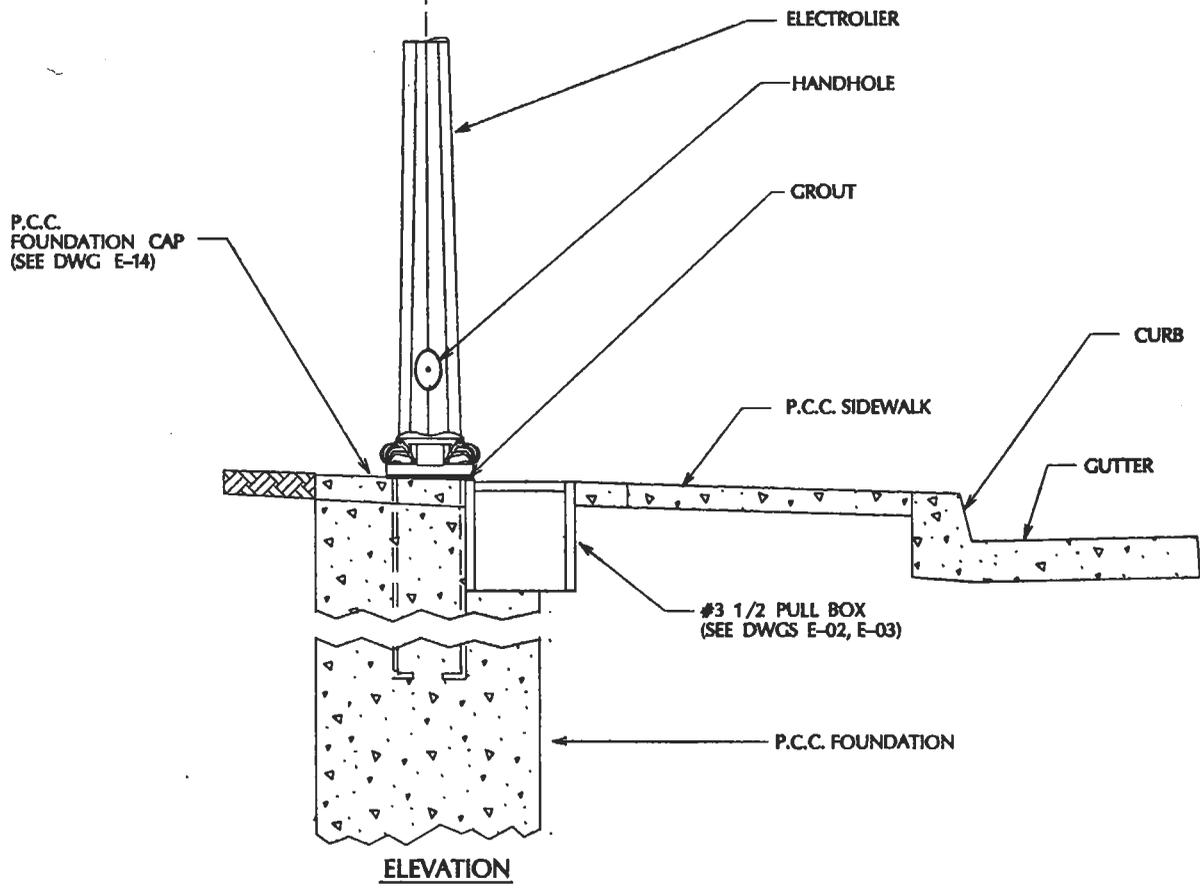
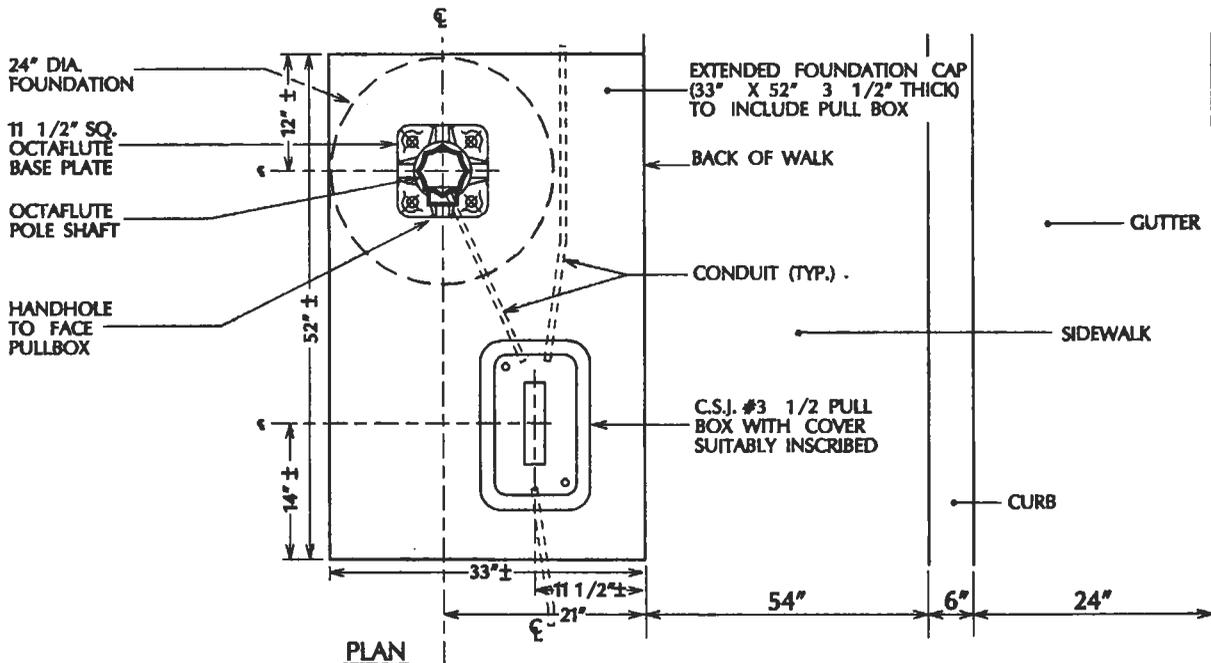
APPROVED BY
awf
 DATE
 3/3/92

**ELECTROLIER LOCATION
 WIDE ATTACHED OR
 DETACHED WALK**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
 E-11



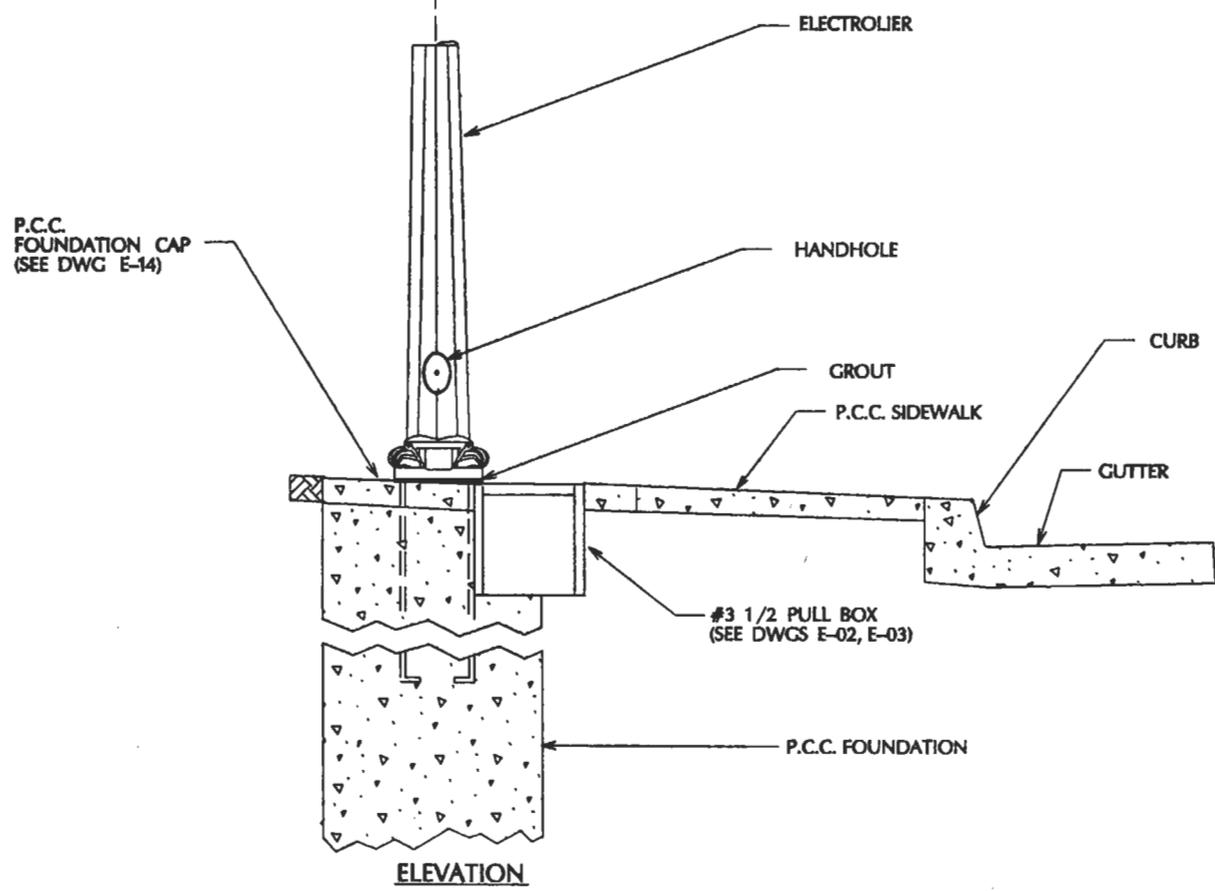
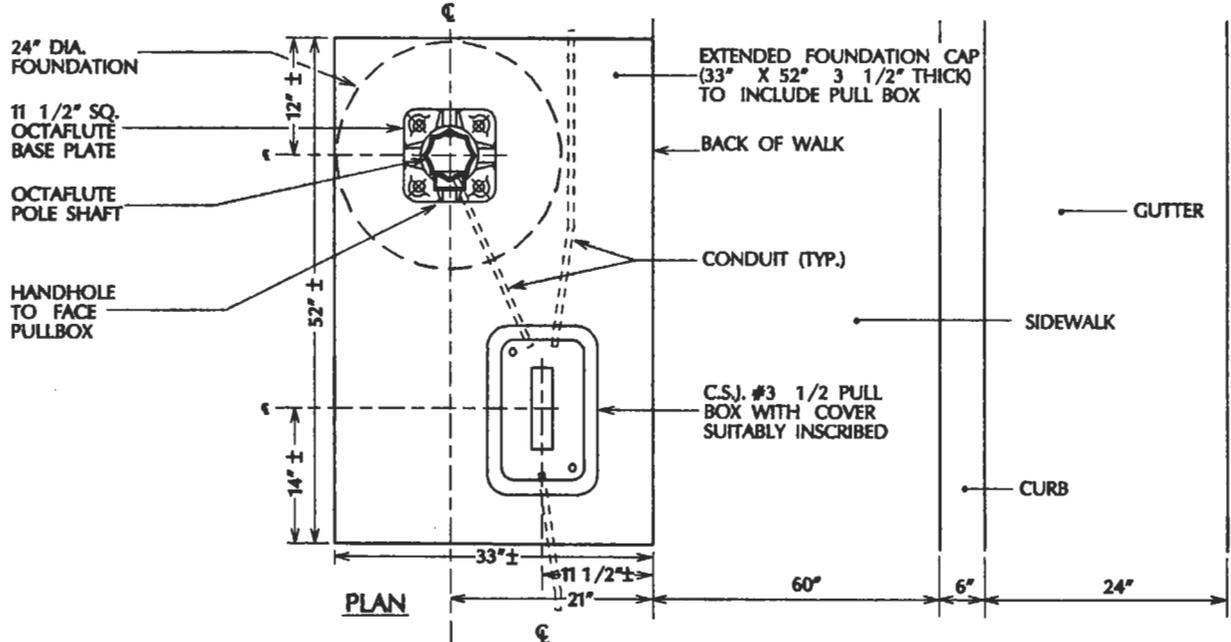
APPROVED BY
AWS
 DATE
 3/3/92

**ELECTROLIER LOCATION
 4'6" ATTACHED SIDEWALK**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
E-12



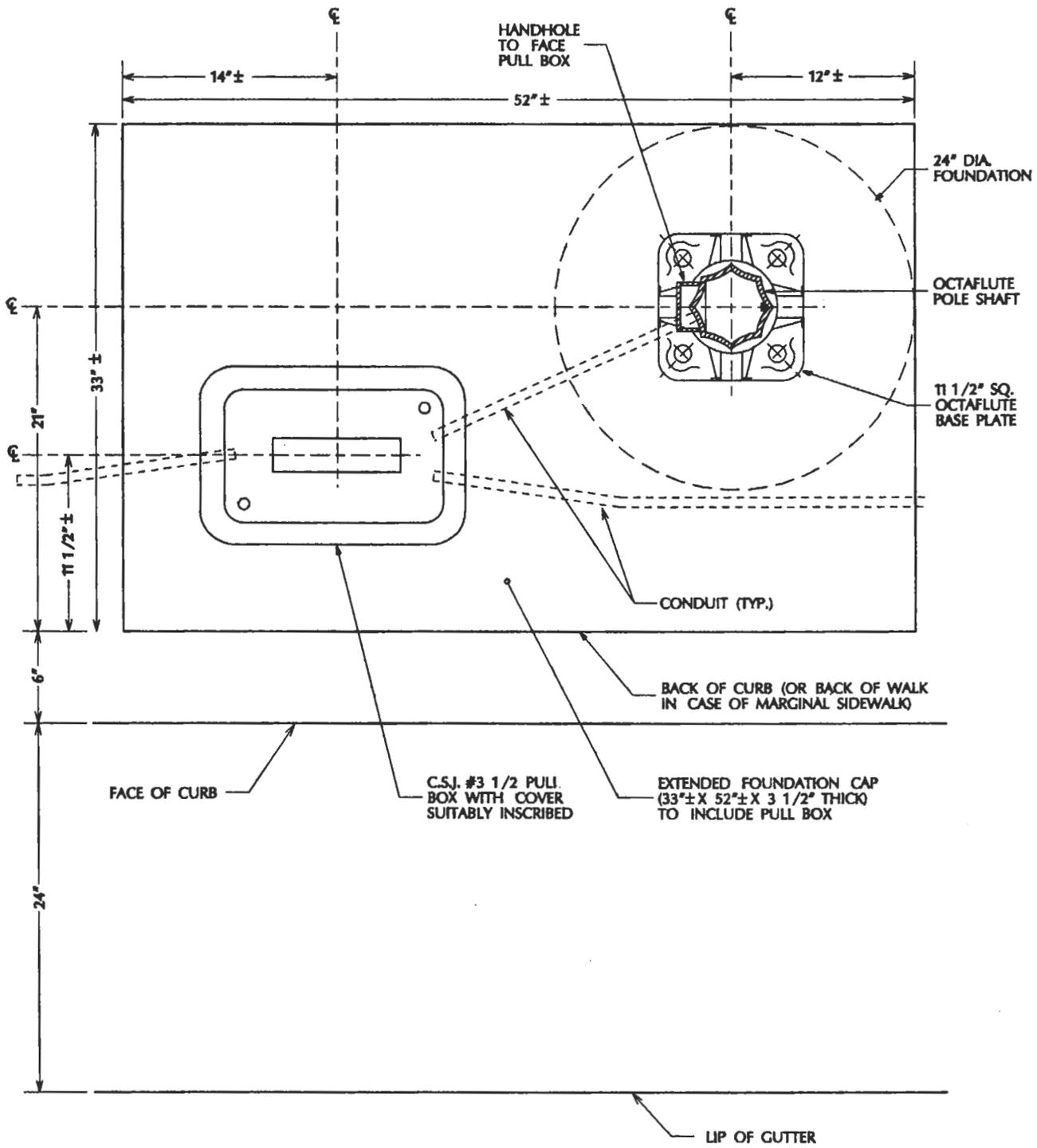
APPROVED BY

 DATE
 3/3/92

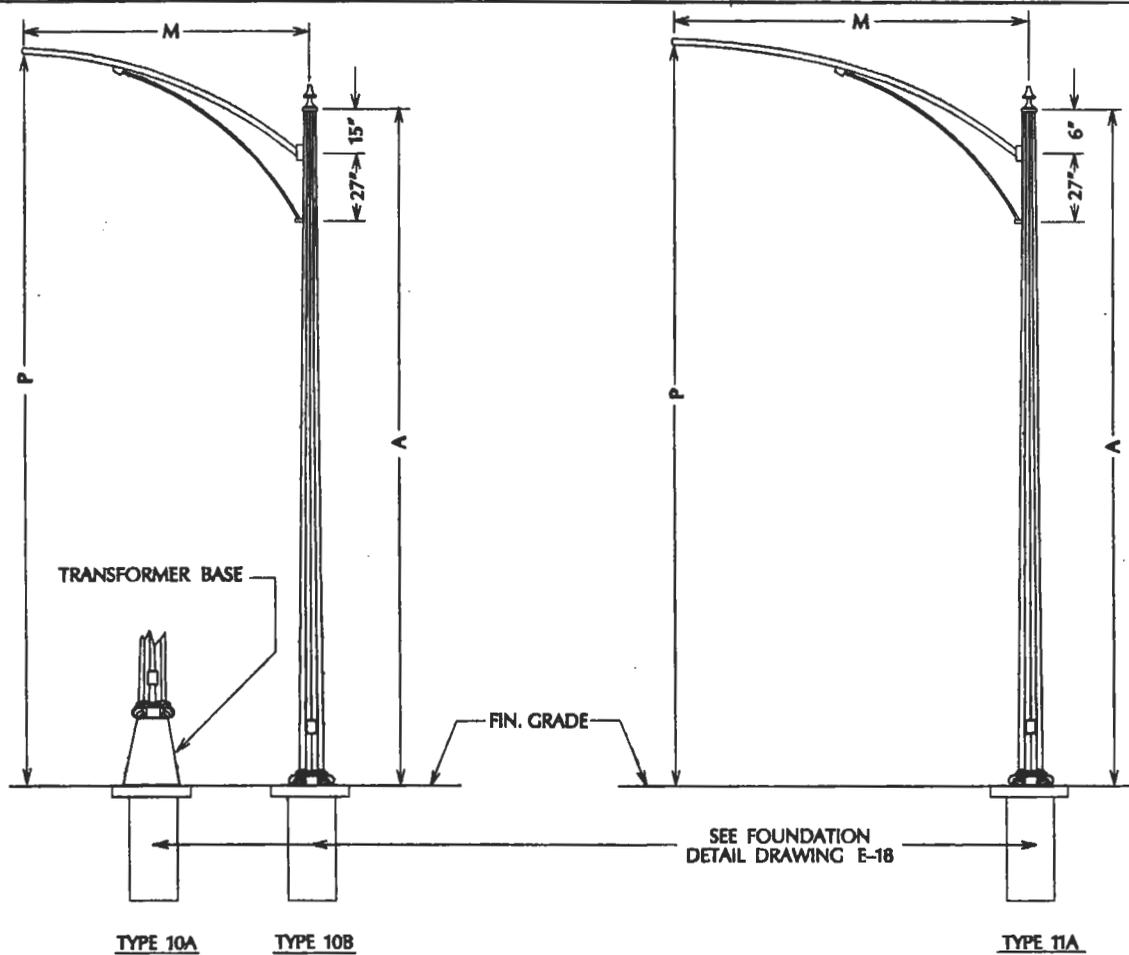
ELECTROLIER LOCATION
INDUSTRIAL DEVELOPMENT
 DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
E-13



APPROVED BY <i>aws</i>	ELECTROLIER /PULL BOX AND FOUNDATION CAP DETAIL		DRAWING NO.
DATE 3/3/92			E-14
DEPARTMENT OF PUBLIC WORKS			



TYPE	POLE DATA				ANCHOR BOLT DATA		LUMINAIRE ARM DATA			TRANSFORMER BASE	FOUNDATION TYPE
	A HEIGHT	THICKNESS	MIN. O.D. AT BASE	MIN. O.D. AT TOP	BC BOLT CIRCLE	ANCHOR BOLT SIZE	M PROJECTED LENGTH	P MOUNTING HEIGHT	ARM TYPE		
10A	30'0"	11 GAGE	8"	3.8"	SEE NOTE (3)	1" 36" 4"	8'	33'6" ±	C	YES	2
10B	30'0"		8"	3.8"	11"		8'	31'9" ±		NO	2
11A	28'9"	7 GAGE	8"	3.98"	11"		12'	31'9" ±	E	2	

NOTES:

1. USE 10B STANDARD WITH TYPE 'C' ARM UNLESS SPECIFIED OTHERWISE.
2. STANDARD FINISH SHALL BE GALVANIZED UNLESS SPECIFIED OTHERWISE.
3. SEE DRAWING E-17 FOR TRANSFORMER BASE REQUIREMENTS.
4. USE TYPE 2 FOUNDATION WITH 1" x 36" x 4" ANCHOR BOLTS FOR SINGLE/TWIN UNIT LUMINAIRE(S) ON ORNAMENTAL POLES.
5. SEE DRAWING E-16 FOR BASE REFERENCES.

APPROVED BY

aws

DATE

3/3/92

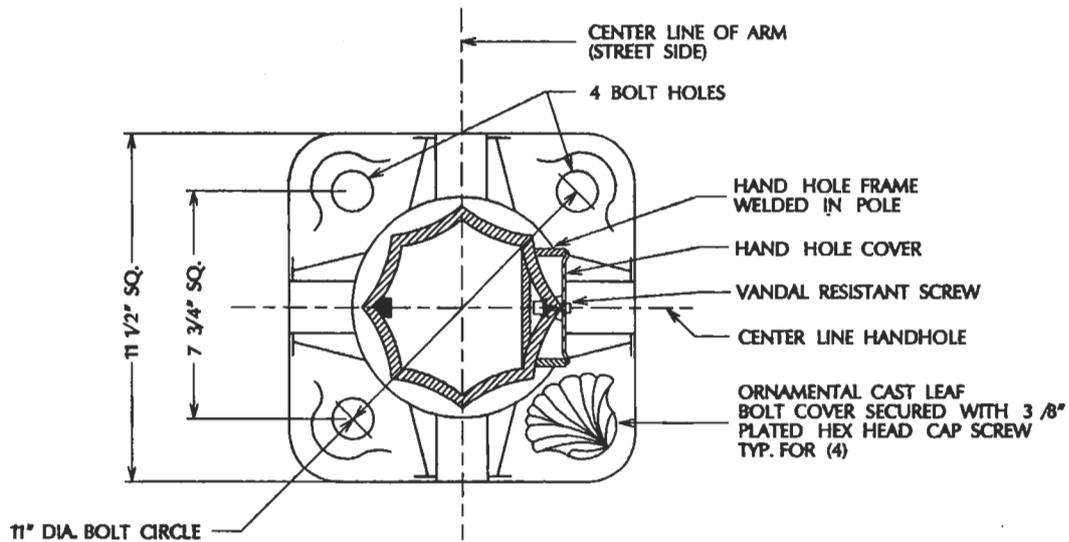
**LIGHTING STANDARDS TYPE
10A, 10B AND 11A - OCTAFLUTE**

DEPARTMENT OF PUBLIC WORKS

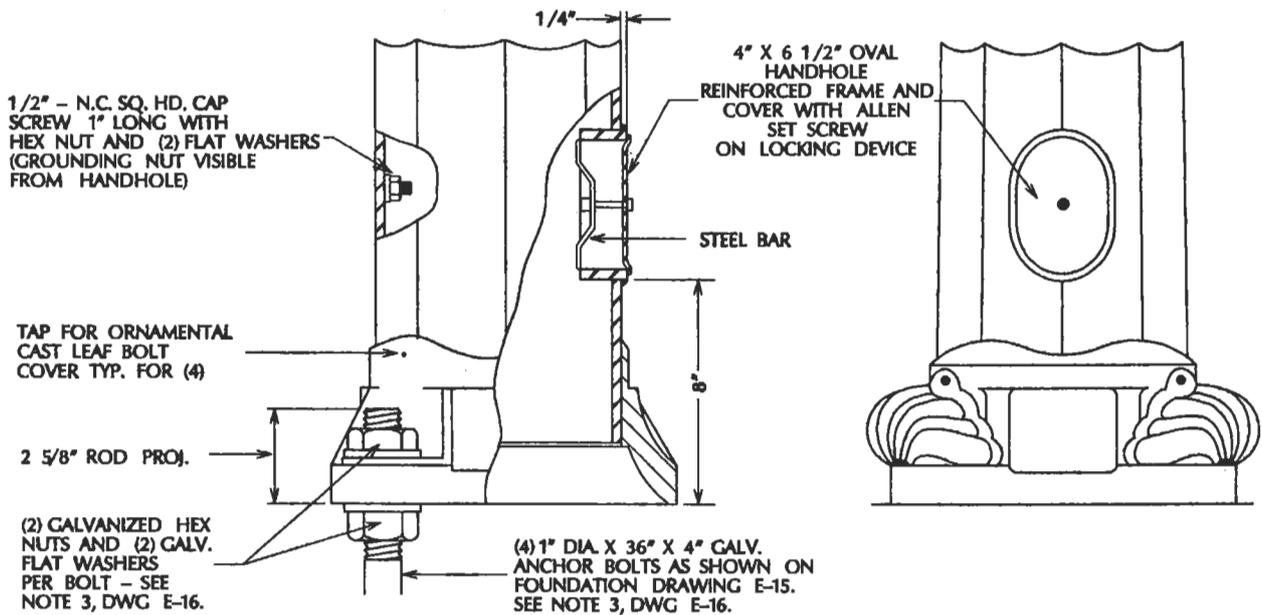


DRAWING NO.

E-15



PLAN VIEW



SIDE VIEW

HAND HOLE VIEW

NOTES:

1. HAND HOLE SHALL BE LOCATED ON LEFT SIDE OF POLE WHEN FACING POLE FROM STREET AND MAST ARM AT RIGHT ANGLE TO STREET.
2. SEE DRAWING E-15 FOR POLE DETAILS.
3. SEE DRAWING E-17 FOR POLE TYPE 10A TRANSFORMER BASE CONNECTING BOLT AND ANCHOR BOLT REQUIREMENTS.

APPROVED BY

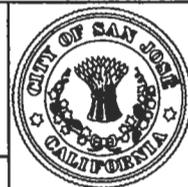
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DATE

3/3/92

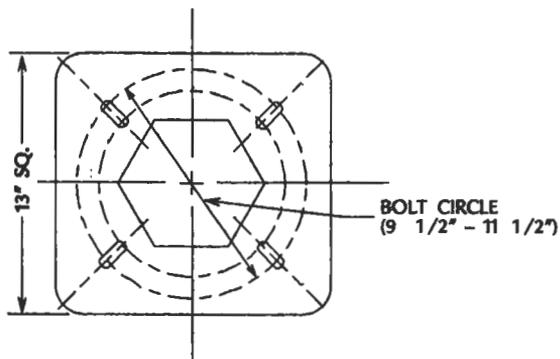
**LIGHTING STANDARDS TYPE 10A, 10B,
AND 11A BASE DETAILS**

DEPARTMENT OF PUBLIC WORKS

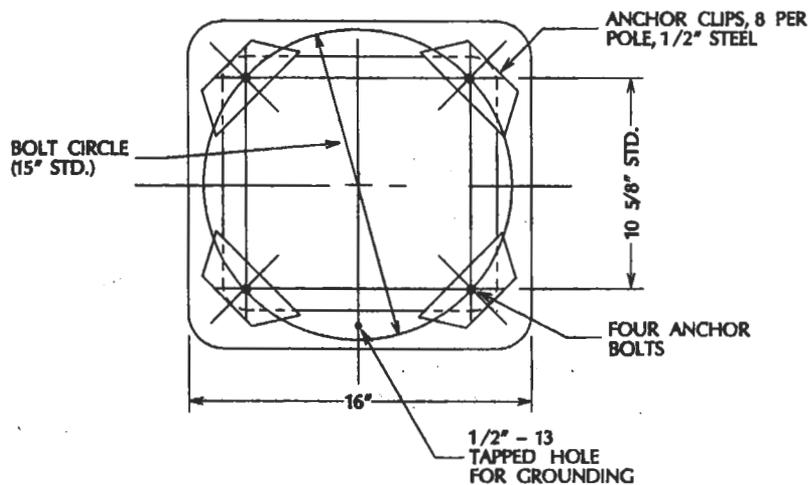
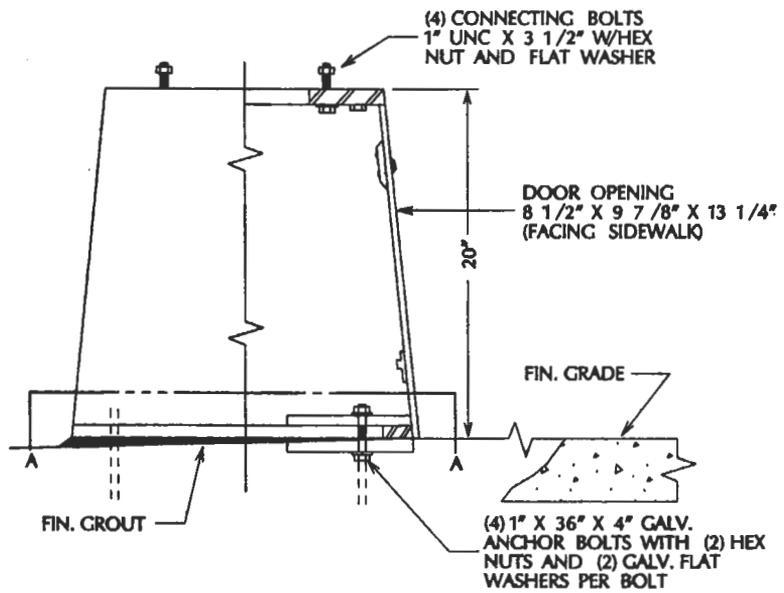


DRAWING NO.

E-16



PLAN VIEW



SECTION A - A

NOTE:
INSTALL DOOR OPENING ON SAME SIDE AS HAND HOLE ON POLE.

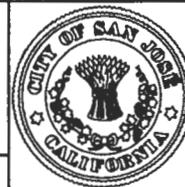
APPROVED BY

AWP
DATE

3/3/92

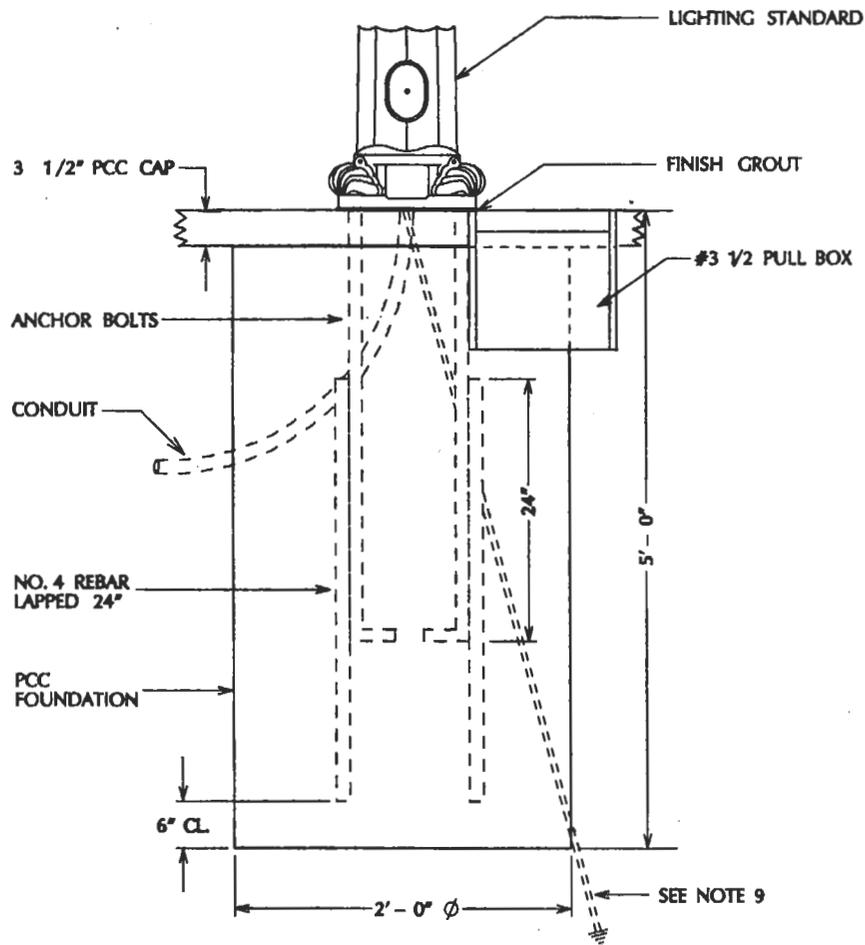
LIGHTING STANDARD TYPE 10A
TRANSFORMER BASE DETAIL

DEPARTMENT OF PUBLIC WORKS



DRAWING
NO.

E-17



TYPE 2

NOTES:

1. STOP FOUNDATION POUR 3 1/2" BELOW GRADE. PLACE FINISH CAP AFTER STANDARD IS SET AND PLUMBED. BUILD UP GROUT UNDER STANDARD BASE ON LOW SIDE (TYP.).
2. SURFACE OF FINISH CAP TO BE AT GRADE AND SLOPED TO MATCH EXISTING OR FUTURE SIDEWALK (TYP.).
3. ANCHOR BOLT SIZE AND LENGTH AS INDICATED ON CHART (TYP.).
4. 1/2" REINFORCED STEEL (#4 REBAR) WIRED TO ANCHOR BOLT WITH 24" OVERLAP (TYP.).
5. 4" SECTION OF ANCHOR BOLT BENT AT 90° RIGHT ANGLE (TYP.).
6. STANDARDS TO BE SET AT 1'-9" TO CENTER FROM BACK OF CURB UNLESS SHOWN OTHERWISE
7. SEE DRAWING E-15 FOR BOLT CIRCLE INFORMATION.
8. SEE DRAWING E-14 FOR PLAN LOCATION AND FOUNDATION CAP DETAIL REQUIREMENTS OF STREETLIGHT.
9. GROUND ROD SET OBLIQUELY THROUGH FOUNDATION IN UNDISTURBED SOIL FOR STREETLIGHTS FED OVERHEAD AND SET IN PULL BOX FOR STREETLIGHTS FED UNDERGROUND.

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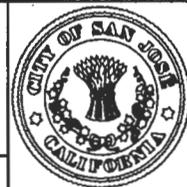
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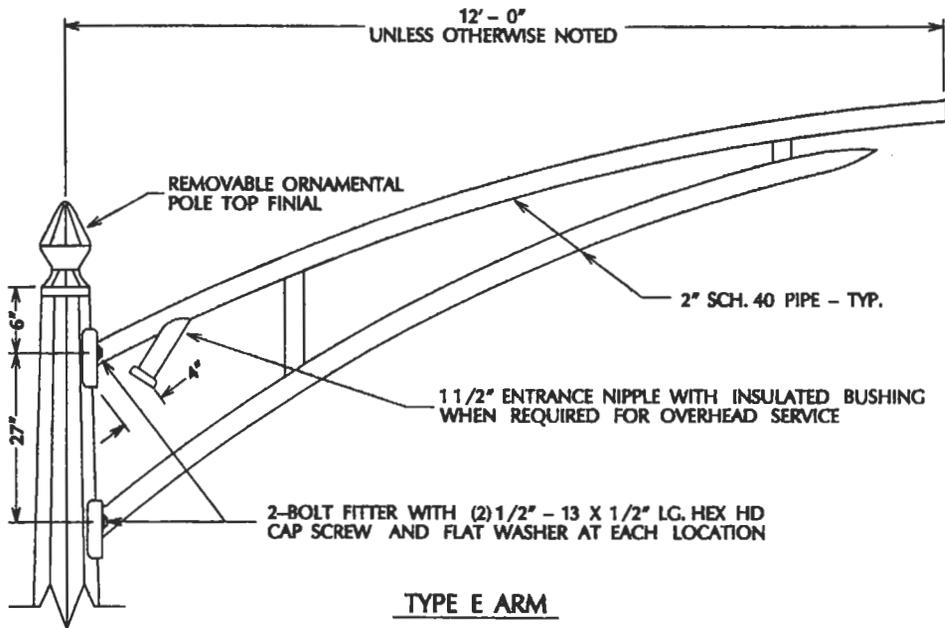
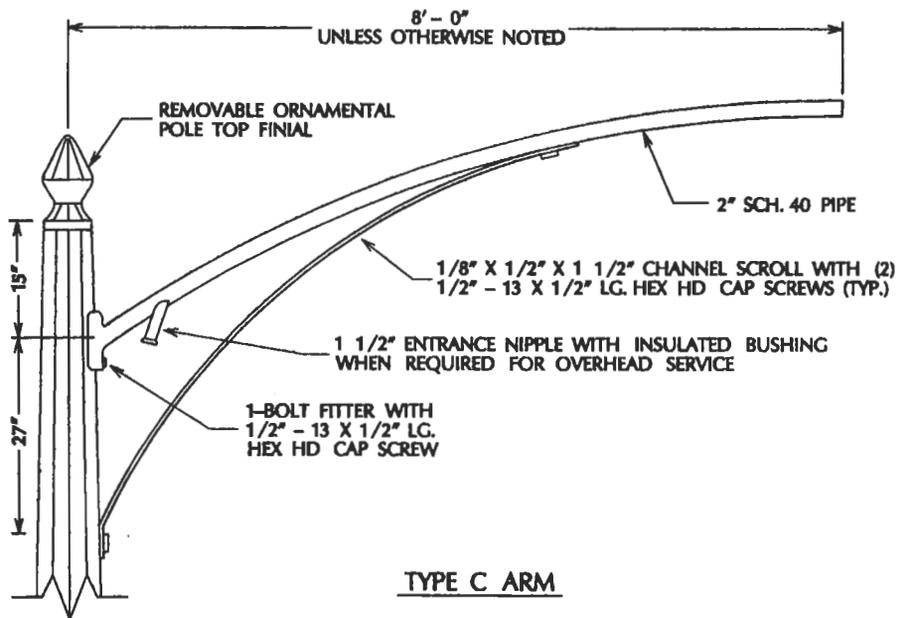
**LIGHTING STANDARD - OCTAFLUTE
TYPE 2 FOUNDATION DETAIL**

DEPARTMENT OF PUBLIC WORKS



DRAWING
NO.

E-18



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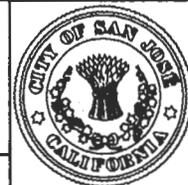
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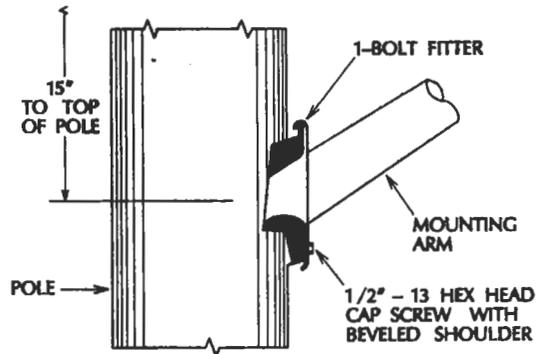
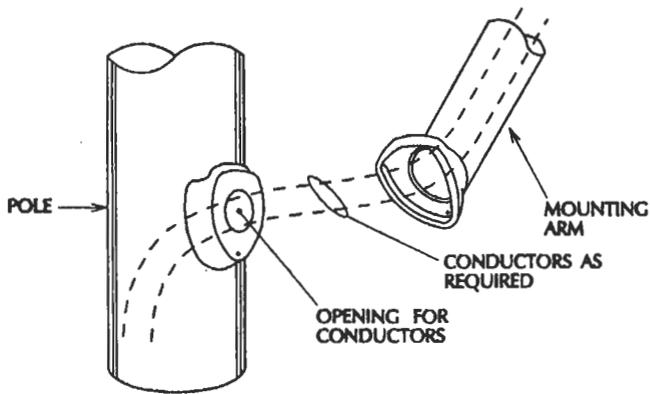
**LIGHTING STANDARD - OCTAFLUTE
MOUNTING ARMS
TYPES C AND E**

DEPARTMENT OF PUBLIC WORKS

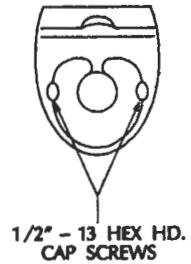
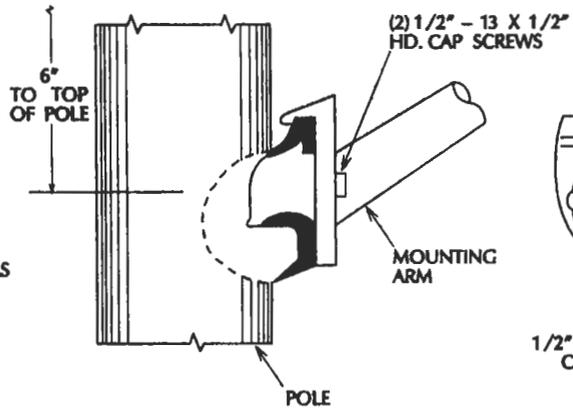
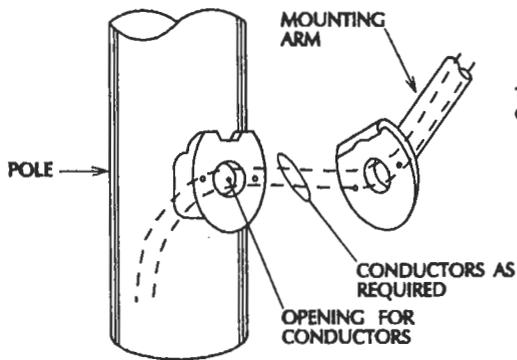


DRAWING
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E-19



TYPE C



TYPE E

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DATE

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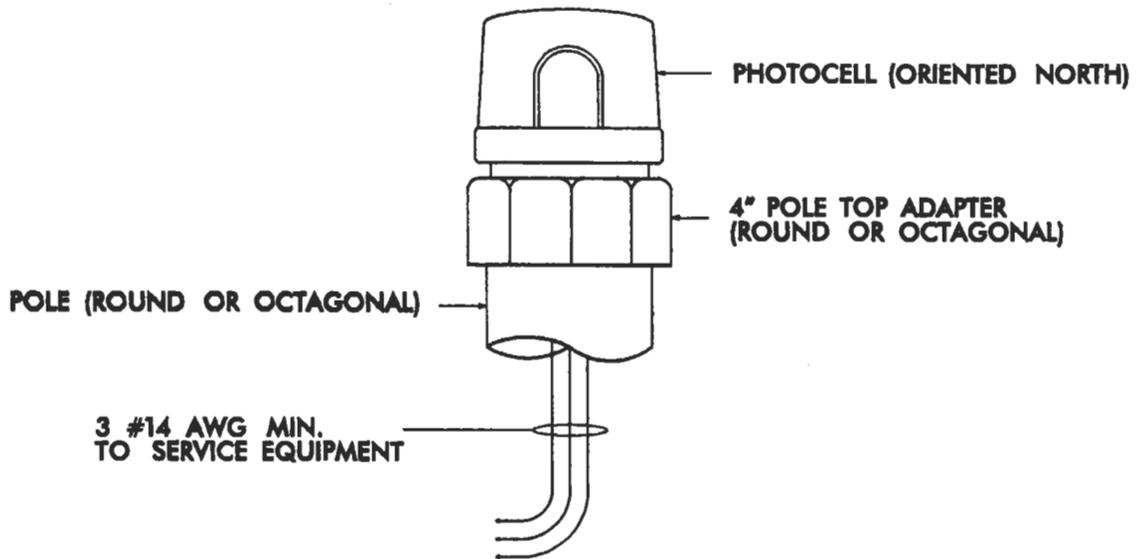
**LIGHTING STANDARD - OCTAFLUTE
BRACKET ATTACHMENTS FOR
TYPE C AND E MOUNTING ARMS**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-20



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3/2/92

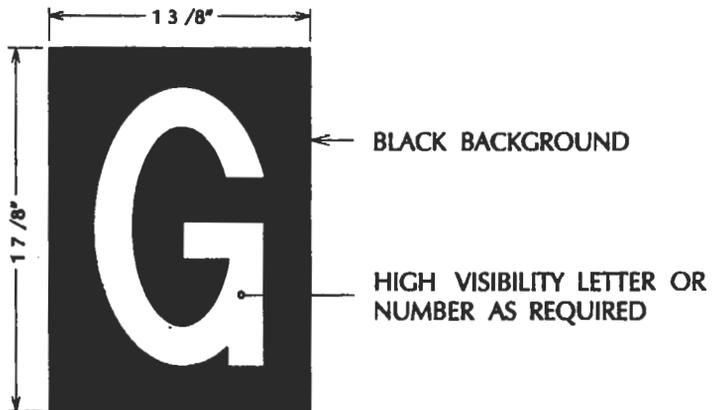
POLE TOP MOUNTED PHOTOCELL

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-21



TYPE AND CHARACTER SIZE

STICK-ON TYPE, YELLOW REFLECTORIZED NUMBERS AND LETTERS ON BLACK BACKGROUND, MEASURING 1 3/8" WIDE AND 1 7/8" HIGH.

INSTALLATION

VERTICALLY ARRANGED WITH SPACE ON EITHER SIDE OF THE MIDDLE LETTER. BOTTOM HEIGHT OF THE NUMBER SHALL BE AT 7' (MIN.) FROM GROUND.

MANUFACTURER

BRADY LABEL COMPANY, 727 WEST GLENDALE AVE., MILWAUKEE, WISCONSIN, OR APPROVED EQUAL. THE CATALOG NUMBER FOR THE BRADY LABEL IS #5890.

SPECIFICATION FOR NUMBERING
STREETLIGHT /TRAFFIC SIGNAL POLES

APPROVED BY

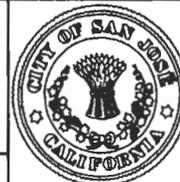
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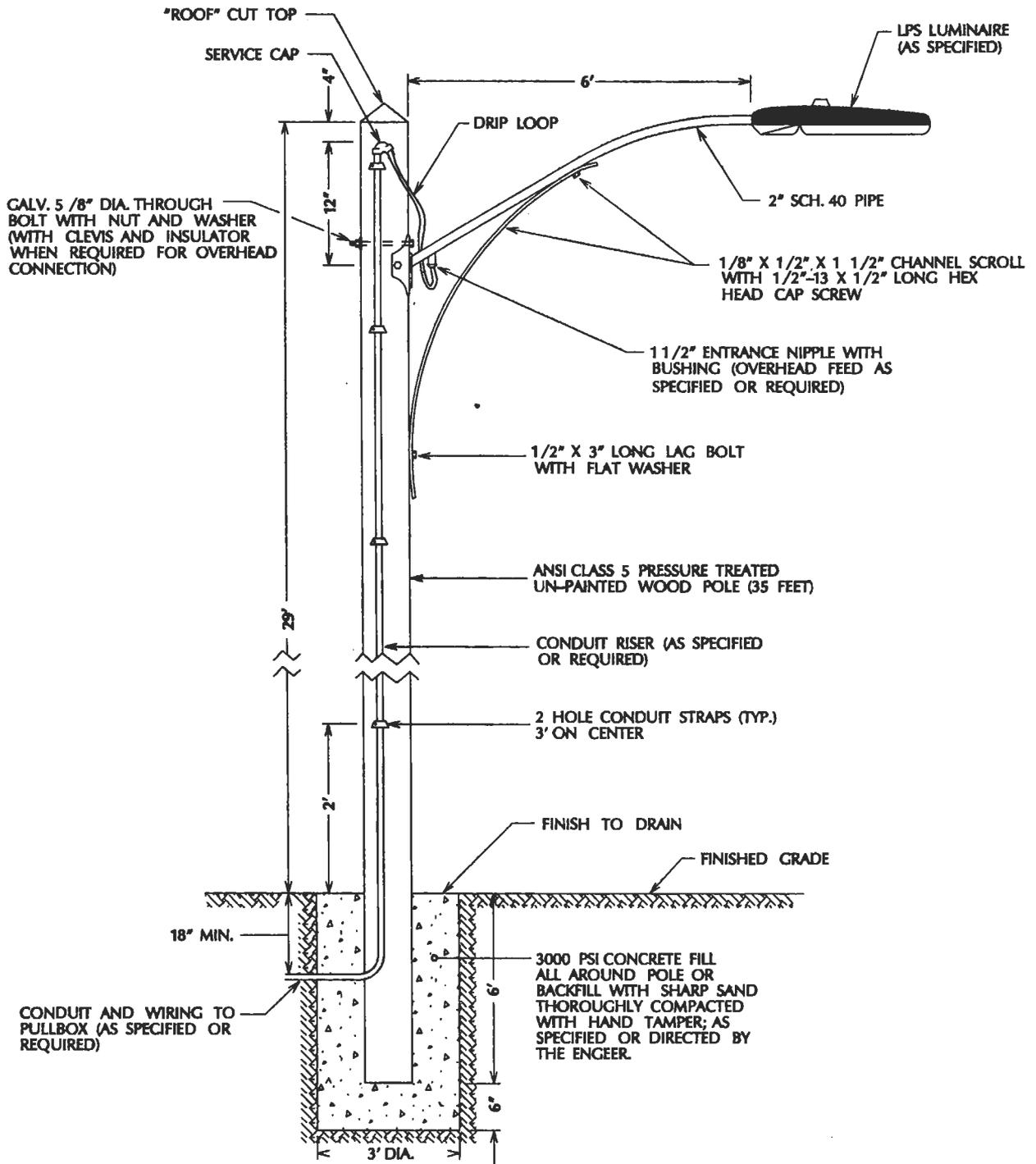
POLE LABELS

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-22



NOTES:

1. PROVIDE OVERHEAD OR UNDERGROUND FEED AS SPECIFIED ON DRAWINGS OR AS DIRECTED BY THE ENGINEER.
2. POLE BAND WITH MOUNTING HARDWARE WIRING AND FUSED CONNECTORS FOR OVERHEAD FEED WHEN REQUIRED SHALL BE PROVIDED IN ACCORDANCE WITH DETAILS E-41 OR E-42 AS SPECIFIED OR AS DIRECTED BY THE ENGINEER.

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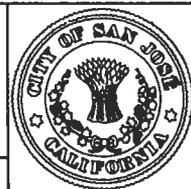
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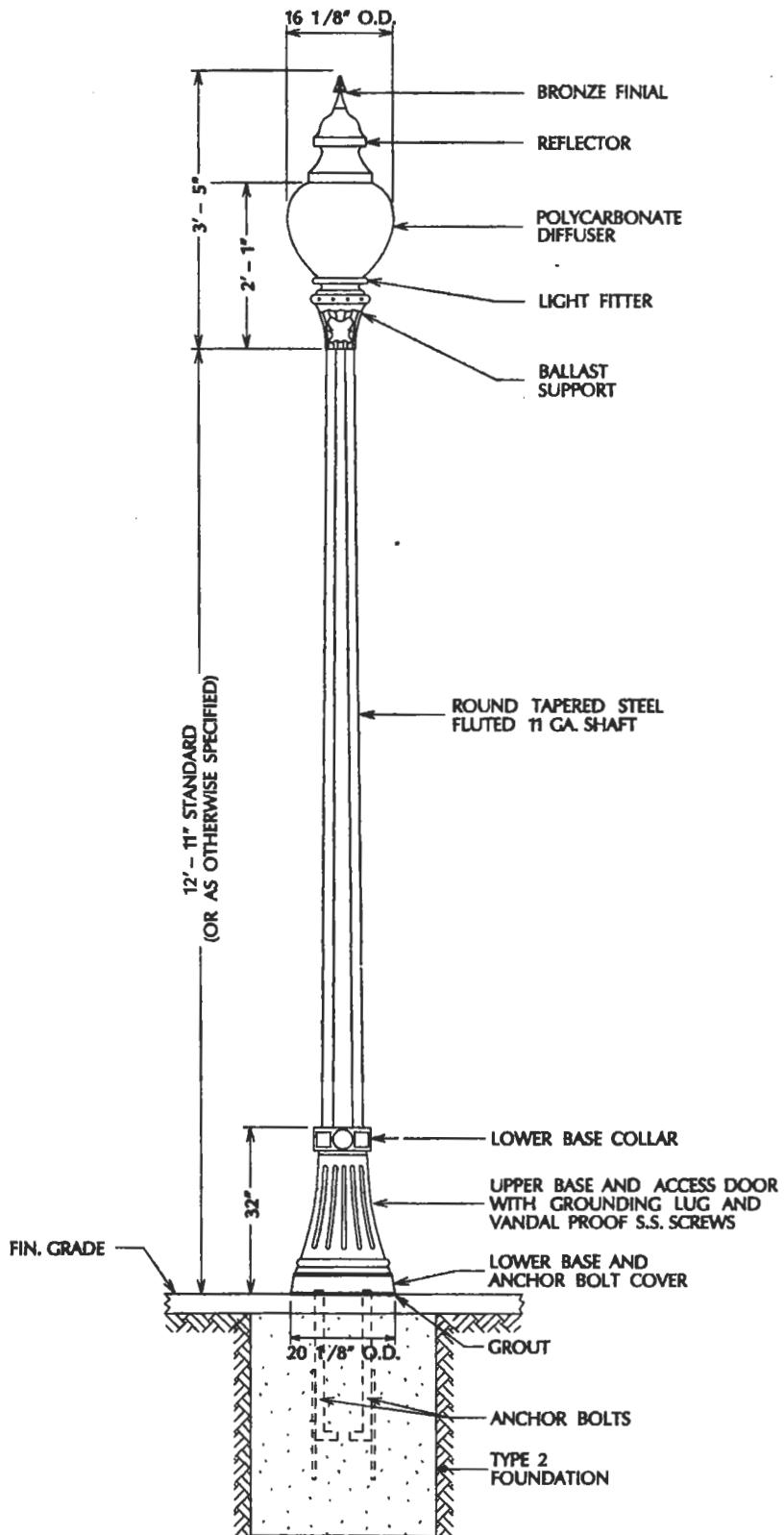
WOOD POLE WITH L.P.S. LUMINAIRE

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-23



NOTES:
 1. SEE DRAWINGS E-46 AND E-47 FOR POLE BONDING REQUIREMENTS.
 2. SEE DRAWINGS E-15 AND E-18 FOR FOUNDATION REQUIREMENTS.

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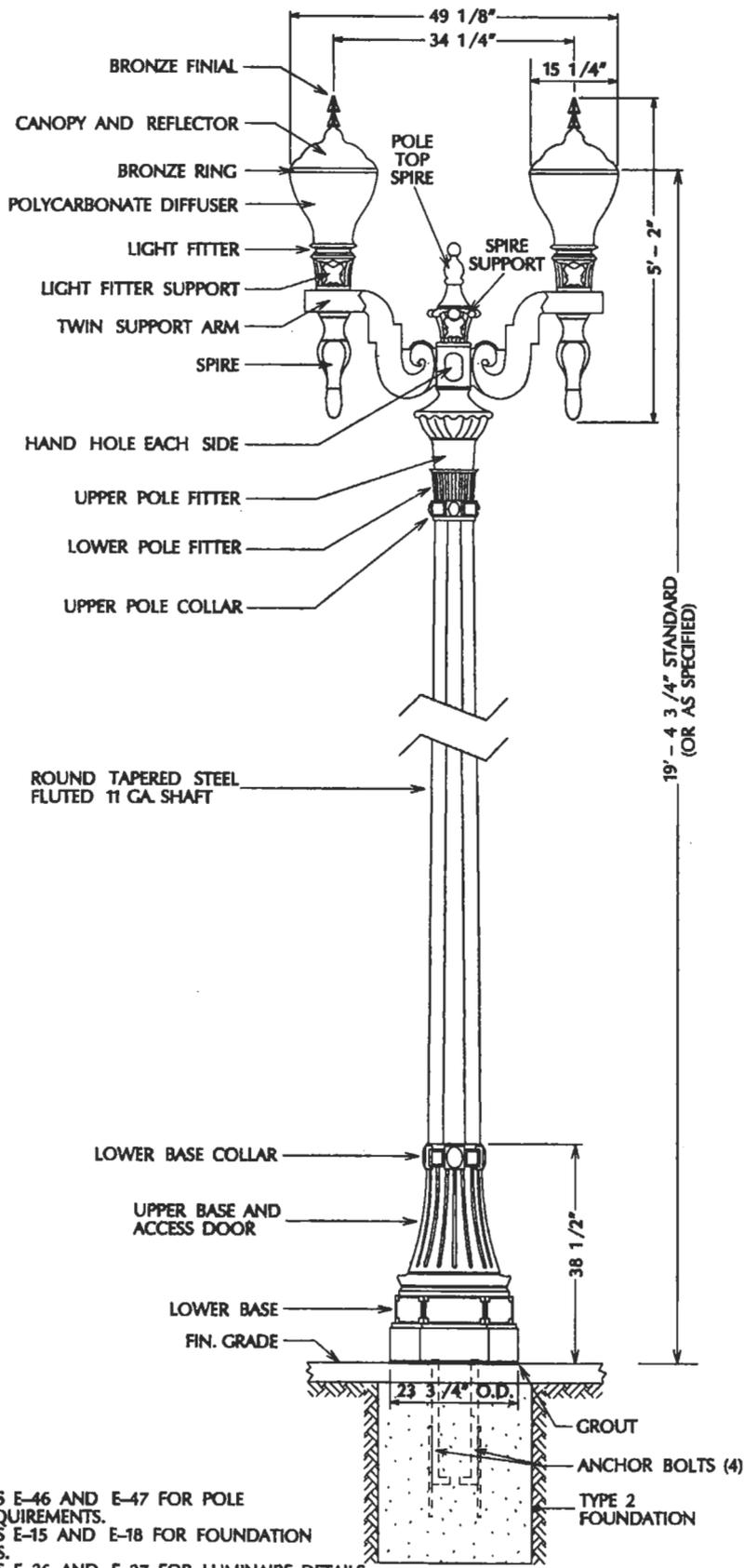
**ORNAMENTAL POLE
 SINGLE LUMINAIRE**

DEPARTMENT OF PUBLIC WORKS



DRAWING
 NO.

E-24



- NOTES:
1. SEE DRAWINGS E-46 AND E-47 FOR POLE BONDING REQUIREMENTS.
 2. SEE DRAWINGS E-15 AND E-18 FOR FOUNDATION REQUIREMENTS.
 3. SEE DRAWINGS E-26 AND E-27 FOR LUMINAIRE DETAILS.

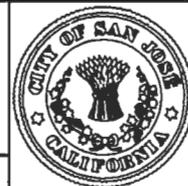
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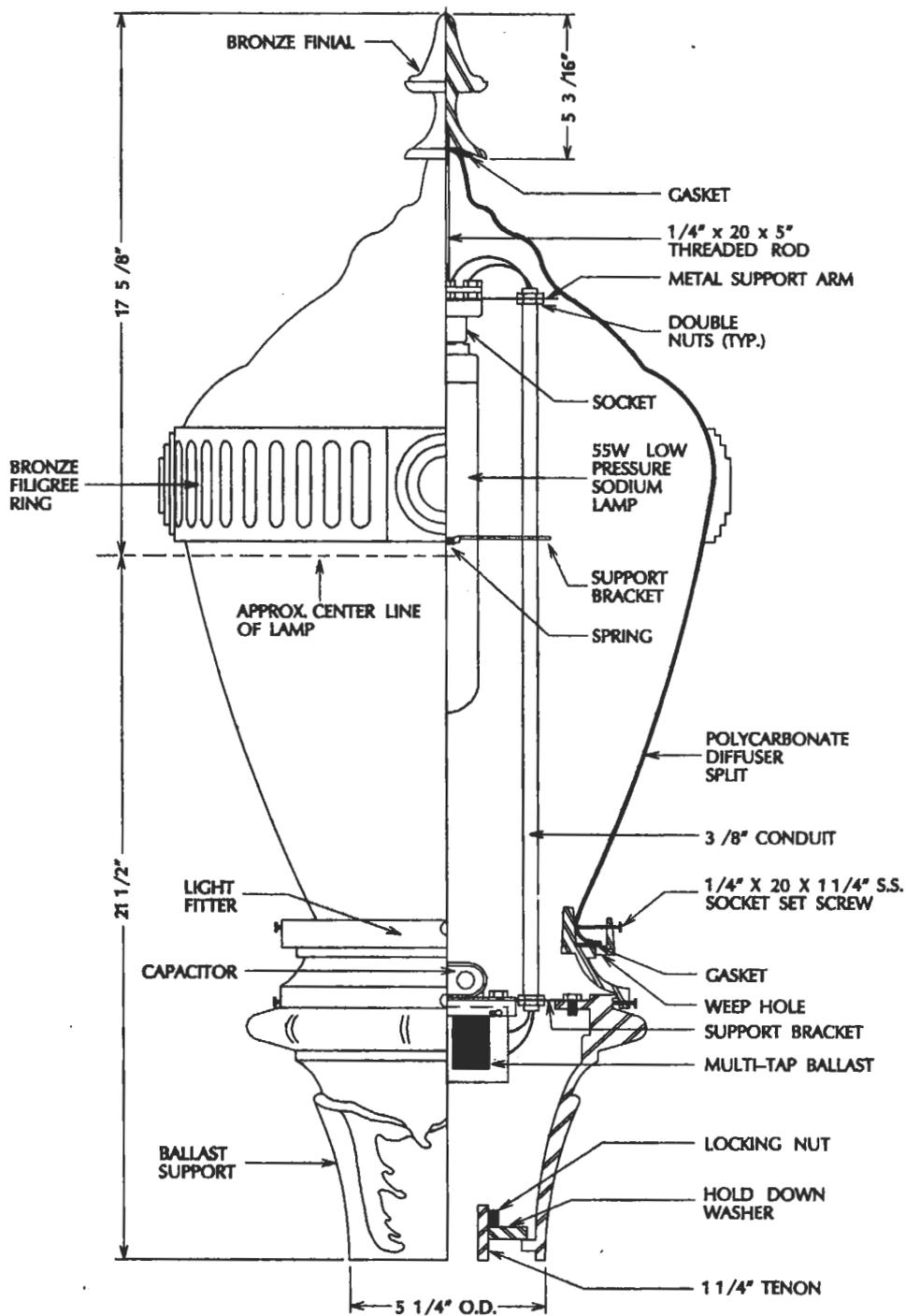
**ORNAMENTAL POLE
TWIN LUMINAIRES**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-25



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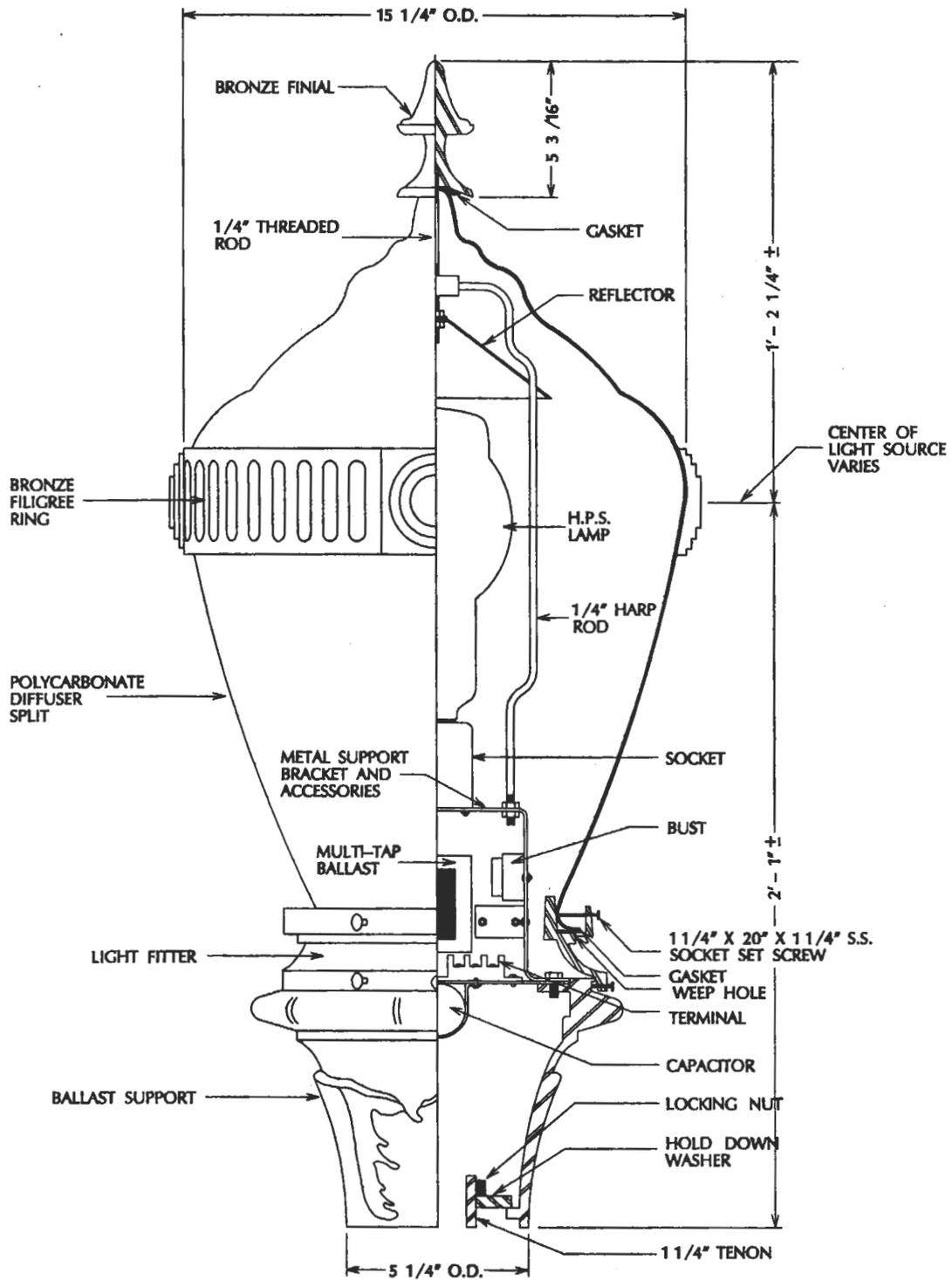
ORNAMENTAL L.P.S.
LUMINAIRE ASSEMBLY
FOR TWIN UNIT

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-26



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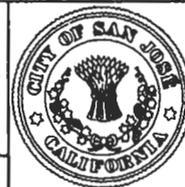
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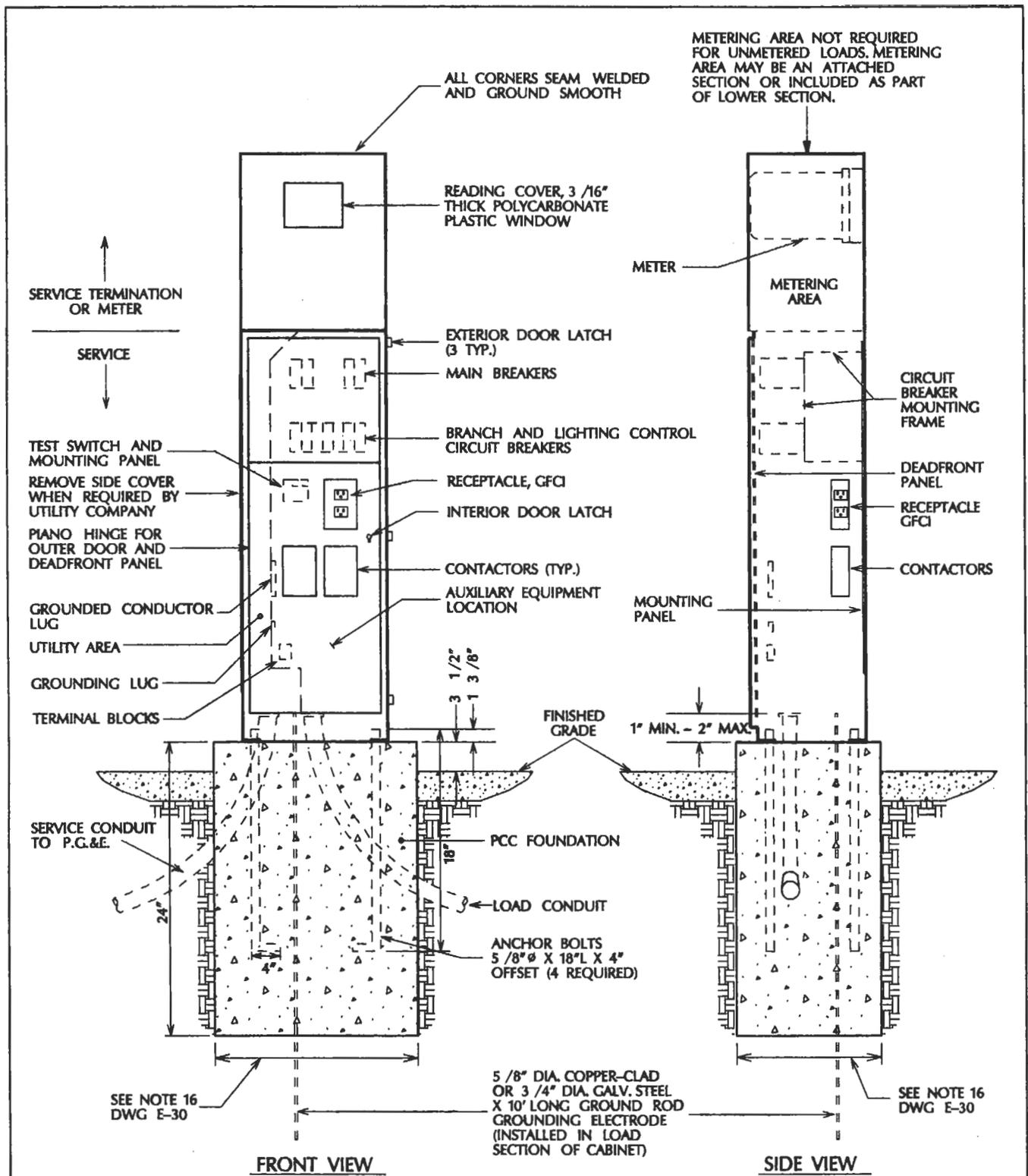
**ORNAMENTAL H.P.S.
LUMINAIRE ASSEMBLY
FOR TWIN UNIT**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-27



- NOTES:
1. TERMINATE CONDUIT 1' MIN. - 2" MAX. ABOVE TOP OF FOUNDATION.
 2. FOR TYPICAL SERVICE WIRING DIAGRAM SEE DRAWING E-31.
 3. SEE NOTES DRAWING E-29 & E-30.

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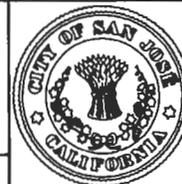
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**SERVICE EQUIPMENT
TYPE III (III M)**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-28

1. SERVICE EQUIPMENT ENCLOSURES AND METERING EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE SERVING UTILITY. WHEN THE SERVING UTILITY PROVIDES BOTH METERED AND UNMETERED CIRCUITS, A SEPARATE BUS SHALL BE PROVIDED FOR EACH CIRCUIT. THE METER AREA SHALL HAVE A SEALABLE, LOCKABLE, RAIN-TIGHT COVER THAT CAN BE REMOVED WITHOUT THE USE OF TOOLS.
2. SERVICE EQUIPMENT ENCLOSURES SHALL BE FACTORY WIRED AND CONFORM TO NEMA STANDARDS.
3. SERVICE EQUIPMENT ENCLOSURES SHALL BE FABRICATED FROM GALVANIZED SHEET STEEL OR FABRICATED FROM SHEET STEEL AND ZINC OR CADMIUM PLATED AFTER FABRICATION.
4. SERVICE EQUIPMENT ENCLOSURES SHALL BE CONSTRUCTED OF 12 GAGE OR THICKER COLD ROLLED STEEL. CABINET COVERS SHALL BE CONSTRUCTED OF 14 GAGE OR THICKER COLD ROLLED STEEL. INTERIOR PANELS SHALL BE CONSTRUCTED OF 16 GAGE OR THICKER COLD ROLLED STEEL, FINISHED WITH A GREEN BAKED ENAMEL, AND CONFORM TO SECTION 86 - 2.11 "SERVICE" OF THE STANDARD SPECIFICATIONS.
5. THE DEAD FRONT PANELS ON SERVICE EQUIPMENT ENCLOSURES SHALL HAVE A CONTINUOUS STAINLESS STEEL PIANO HINGE. THE PANEL IN FRONT OF THE BREAKERS SHALL BE SECURED WITH CAPTIVE SCREWS; THE LOWER PANEL SHALL BE SECURED WITH A LATCH OR CAPTIVE SCREWS.
6. THE EXTERIOR DOOR SHALL HAVE PROVISIONS FOR PADLOCKING WITH A CITY-FURNISHED LOCK. THE PADLOCK HOLE SHALL BE A MINIMUM DIAMETER OF 7 /16 INCH.
7. FASTENERS ON THE EXTERIOR OF THE ENCLOSURE SHALL BE VANDAL-RESISTANT AND SHALL NOT BE REMOVABLE FROM THE EXTERIOR. ALL SCREWS, NUTS, BOLTS, AND WASHERS SHALL BE STAINLESS STEEL.
8. TERMINAL LUGS SHALL BE COPPER OR TIN-PLATED ALUMINUM. SOLID NEUTRAL TERMINAL STRIP SHALL BE RATED FOR 200 AMPERES AND FOR USE WITH COPPER CONDUCTORS. ALL TERMINALS SHALL BE COMPATIBLE WITH COPPER CONDUCTORS TO SUIT THE CONDUCTORS SHOWN ON THE PLAN. THE TERMINALS SHALL INCLUDE BUT ARE NOT LIMITED TO:
 - A) INCOMING TERMINALS (LANDING LUGS).
 - B) NEUTRAL LUGS.
 - C) SOLID NEUTRAL TERMINAL STRIP.
 - D) TERMINAL STRIPS FOR CONDUCTORS WITHIN THE ENCLOSURE.
9. AT LEAST 6 STANDARD SINGLE POLE CIRCUIT BREAKER SPACES (3 /4" NOMINAL) SHALL BE PROVIDED.
10. ALL CONTROL WIRING SHALL BE 600-VOLT NO. 14 STRANDED MACHINE TOOL WIRE. WHERE SUBJECT TO FLEXING, 19 STRAND WIRE SHALL BE USED.
11. ALL MAIN BUSSING INCLUDING P.G.&E. LANDING LUGS SHALL BE RATED FOR 200 AMPERES UNLESS SHOWN OTHERWISE ON DRAWINGS AND FOR USE WITH COPPER CONDUCTORS.
12. A PLASTIC LAMINATED WIRING DIAGRAM SHALL BE PROVIDED WITH BRASS MOUNTING EYELETS AND ATTACHED TO THE INSIDE OF THE ENCLOSURE OR THE WIRING DIAGRAM SHALL BE MOUNTED TO THE INTERIOR OF THE DOOR WITH AN UL OR ETL APPROVED METHOD.

APPROVED BY 	SERVICE EQUIPMENT TYPE III (III M) NOTES		DRAWING NO. E-29
DATE 3/2/92			

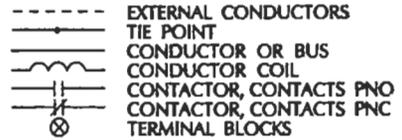
13. AN ENGRAVED PHENOLIC NAMEPLATE ON THE DEAD FRONT PANEL INDICATING THE FUNCTION OF EACH CIRCUIT WITHIN THE ENCLOSURE SHALL BE INSTALLED WITH STAINLESS STEEL RIVETS OR STAINLESS STEEL SCREWS:
 - A) ADJACENT TO THE BREAKER OR DEVICE. CHARACTER SIZE SHALL BE A MINIMUM OF 1/8".
 - B) AT TOP OF THE EXTERIOR DOOR PANEL INDICATING SYSTEM NO., VOLTAGE LEVEL, AND NUMBER OF PHASES. CHARACTER SIZE SHALL BE A MINIMUM OF 3/16".
14. THE PLAN SHOWS THE APPROXIMATE LOCATION OF DEVICES WITHIN THE ENCLOSURE. COMPONENTS MAY BE REARRANGED. HOWEVER, THE "WORKING" CLEARANCES WITHIN THE ENCLOSURE SHALL BE MAINTAINED.
15. IN UNPAVED AREAS A RAISED PCC PAD 24" X 3 1/2" X WIDTH OF FOUNDATION SHALL BE PLACED IN FRONT OF NEW SERVICE INSTALLATION. PAD SHALL BE SET TO ELEVATION OF FOUNDATION UNLESS SHOWN OTHERWISE.
16. FOUNDATION SHALL EXTEND 2" MINIMUM BEYOND EDGE OF ENCLOSURE.
17. INTERNAL BUSSING, WHERE SHOWN, IS TYPICAL ONLY. ALTERNATIVE DESIGNS OF PROPOSED SERVICE EQUIPMENT ENCLOSURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
18. CIRCUIT BREAKERS MAY BE MOUNTED IN THE VERTICAL OR HORIZONTAL POSITION.
19. ON TYPE IIIM SERVICE EQUIPMENT ENCLOSURES, THE METER VIEWING WINDOWS SHALL BE LOCATED ON THE FRONT SIDE OF THE SERVICE EQUIPMENT ENCLOSURE.
20. ALL ANCHOR BOLTS SHALL BE BONDED IN ACCORDANCE WITH DRAWINGS E-83 OR E-84.

APPROVED BY <i>aud</i>	<p style="text-align: center;">SERVICE EQUIPMENT TYPE III (III M) NOTES - CONTINUED</p> <p style="text-align: center;">DEPARTMENT OF PUBLIC WORKS</p>		DRAWING NO. E-30
DATE 3/3/92			

TYPE III (III M) SERVICE (120 /240V) EQUIPMENT SCHEDULE		
ITEM NO.	COMPONENT	NAME PLATE DESCRIPTION
1	NEUTRAL LUG, 200A	
2	LANDING LUG, 200A	
3	TEST BYPASS FACILITIES	
4	METER SOCKET AND SUPPORT	
5	TERMINAL BLOCKS	
6	SOLID NEUTRAL LUG	
7	GROUND LUG	
8	GROUND ROD	
9	ANCHOR BOLT BONDING ALL 4 ANCHOR BOLTS (TYP.)	
10	100A, 240V, 2P, CKT BKRS	MAIN BREAKERS (UNMETERED, METERED)
11	30A, 240V, 2P, CKT BKR	STREETLIGHTING
12	60A, 120V, 1P, CKT BKR	SIGNALS
13	15A, 120V, 1P, CKT BKR	IRRIGATION
14	15A, 120V, 1P, CKT BKR	STREETLIGHTING CONTROL
15	PHOTO ELECTRIC UNIT	
16	15A, 1P, TEST SWITCH	STREETLIGHTING TEST SWITCH
17	30A, 4P CONTACTOR	
18	15A, 120V, 1P GFCI BKR	GFCI RECEPTACLE
19	20A, 120V, 1P, BKR	SPACE

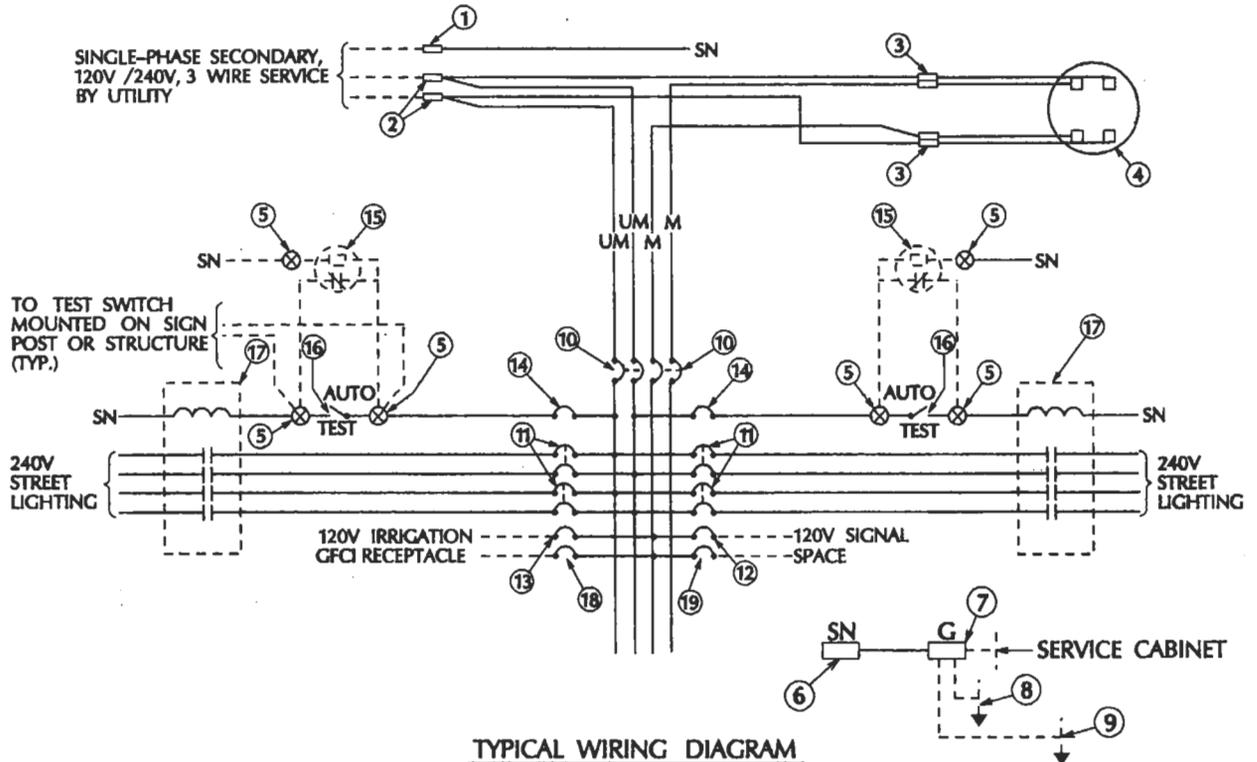
ABBREVIATION /SYMBOL LEGEND

- P POLE
- CKT BKR CIRCUIT BREAKER
- A AMPERE
- V VOLTS
- UM UNMETERED
- M METERED
- SN SOLID NEUTRAL
- PNO POLE NORMALLY OPEN
- PNC POLE NORMALLY CLOSED
- UG UNDERGROUND



NOTES (FOR SERVICE EQUIPMENT):

- VOLTAGE RATINGS OF SERVICE EQUIPMENT SHALL CONFORM TO THE SERVICE VOLTAGES INDICATED ON THE PLANS.
- UNLESS OTHERWISE INDICATED ON THE PLANS, ALL SERVICE EQUIPMENT ITEMS SHALL BE PROVIDED FOR EACH SERVICE EQUIPMENT ENCLOSURE AS SHOWN ON DRAWING E-28.
- DIMENSIONS OF SERVICE EQUIPMENT ENCLOSURES MEET THE REQUIREMENTS OF THE SERVING UTILITY.
- MOUNT PHOTOELECTRIC UNIT ON NEAREST ELECTROLIER WITH A POST-TOP ADAPTOR.
- PROVIDE ONE TEST SWITCH WITH SEPARATE CIRCUIT BREAKER FOR EACH LIGHTING CONTACTOR AND CORRESPONDING CONTROL CIRCUIT.



TYPICAL WIRING DIAGRAM

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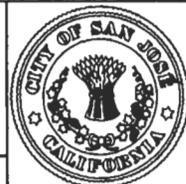
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SERVICE EQUIPMENT - TYPE III (III M)
TYPICAL WIRING DIAGRAM /SCHEDULE

DEPARTMENT OF PUBLIC WORKS



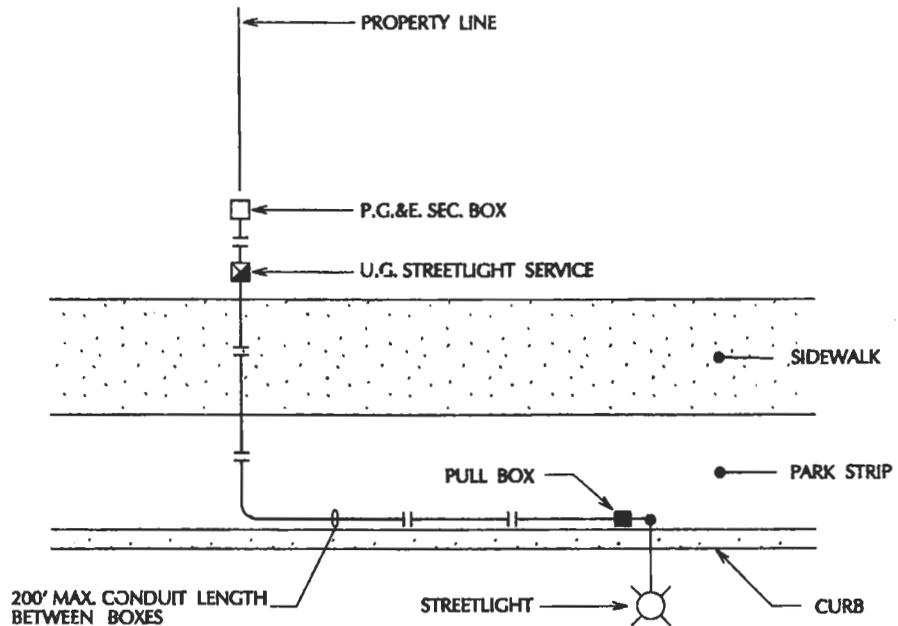
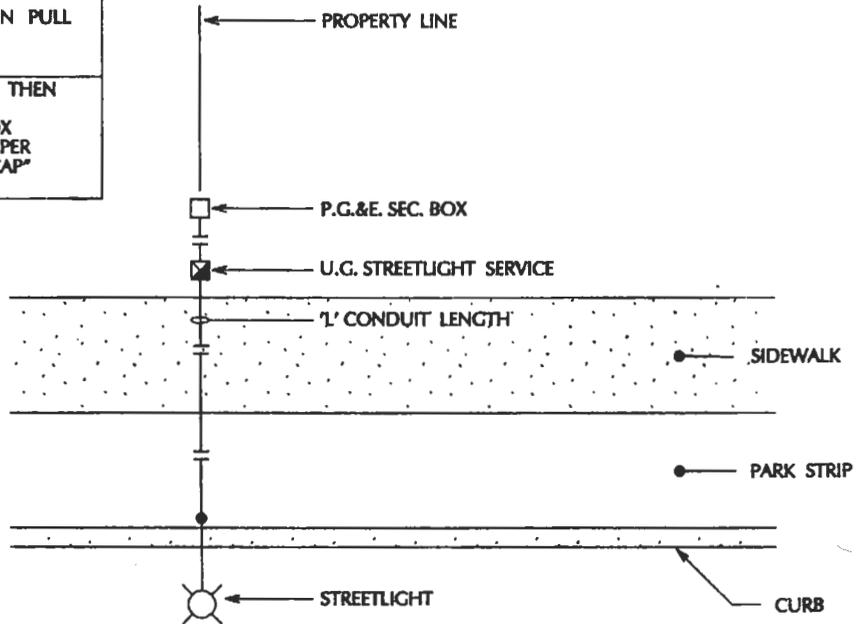
DRAWING NO.

E-31

CONDUIT LENGTH 'L' TABLE

IF 'L' IS LESS THAN 10' - THEN PULL BOX IS NOT REQUIRED AT ELECTROLIER

IF 'L' IS GREATER THAN 10' - THEN PULL BOX IS REQUIRED AT ELECTROLIER. PLACE PULL BOX ADJACENT TO ELECTROLIER, PER "EXTENDED FOUNDATION CAP" DRAWING E-14



NOTE:
SEE DRAWINGS E-33, E-34, E-35, AND E-36 FOR UNDERGROUND SERVICE REQUIREMENTS.

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DATE

3/3/92

P.G.&.E. SECONDARY /U.G. STREETLIGHT SERVICE PULL BOX LOCATION FOR NEW U.G. RESIDENTIAL DEVELOPMENT

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-32

#3 1/2 PRECAST CONCRETE BOX MIN., WITH LID MARKED "CSJ SERVICE", OR SIZED AS SPECIFIED ON DRAWINGS

TAPE UNUSED PORTION OF CONNECTOR TO PROVIDE A WATERTIGHT SEAL (FOR FUTURE 240V USE)

WATERPROOF 2 POLE FUSED SPLICE CONNECTOR RATED 30A, 600V WITH ONE 30A FUSE

SIDEWALK OR TOP OF CURB GRADE

WATERPROOF SPLICE (TYP.)

CONDUIT BELL END (TYP.)

SEAL AROUND CONDUIT WITH GROUT (TYP.)

ROOFING PAPER

1 1/2" PVC SCH. 40 CONDUIT

6" MIN.

6" MIN. (TYP.)

UNGROUND, NEUTRAL, AND GROUNDING CONDUCTORS TO 120V LOAD (#10 AWG MIN. CONDUCTOR SIZE)

GROUT BOTTOM OF BOX 1" MIN. AND 2" MAX.

5/8" DIA. COPPER-CLAD OR 3/4" DIA. GALV. STEEL X 10' LONG GROUND ROD GROUNDING ELECTRODE

PVC SCH. 40 OR 80 SERVICE CONDUIT TO P.G.&E.

120/240 VOLT 3 WIRE SERVICE CONDUCTORS TO P.G.&E. (#8 AWG MIN. CONDUCTOR SIZE)

DRAIN ROCK 1" MIN. - 2" MAX. AGGREGATE

DRAIN HOLE 1" MIN. - 2" MAX.

UL LISTED GROUND CLAMP SUITABLE FOR DIRECT BURIAL / CONCRETE ENCASUREMENT APPLICATION (TYP.)

DIMENSION A: 1" MIN., 2" MAX. (TYP. - ALL CONDUITS)
B: 1" MIN., 2" MAX. ABOVE GROUT (TYP. ALL CONDUITS)

NOTES:

- SEE NOTES DRAWINGS E-04, E-05, E-06, AND E-37
- PROVIDE 3' OF SLACK IN ALL CONDUCTORS IN ACCORDANCE WITH SPECIFICATIONS. (SLACK NOT SHOWN).

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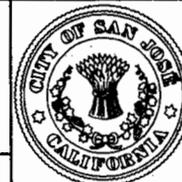
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3/3/92

UNDERGROUND STREETLIGHT SERVICE
TYPE IA - 120V

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-33

#3 1/2 PRECAST CONCRETE BOX MIN., WITH LID MARKED "CSJ SERVICE", OR SIZED AS SPECIFIED ON DRAWINGS

WATERPROOF 2 POLE FUSED SPLICE CONNECTOR RATED 30A, 600V WITH TWO 30A FUSES

SIDEWALK OR TOP OF CURB GRADE

WATERPROOF SPLICE (TYP.)

36" TAIL WITH TAPED END

CONDUIT BELL END (TYP.)

SEAL AROUND CONDUIT WITH GROUT (TYP.)

ROOFING PAPER

1 1/2" PVC SCH. 40 CONDUIT

1/4" MIN. A

6" MIN. (TYP.)

2 UNGROUNDED AND ONE GROUNDING CONDUCTORS TO 240V LOAD (#10 AWG MIN. CONDUCTOR SIZE)

GROUT BOTTOM OF BOX 1" MIN. AND 2" MAX.

5/8" DIA. COPPER-CLAD OR 3/4" DIA. GALV. STEEL X 10' LONG GROUND ROD GROUNDING ELECTRODE

PVC SCH. 40 OR 80 SERVICE CONDUIT TO P.G.&E.

120/240 VOLT 3 WIRE SERVICE CONDUCTORS TO P.G.&E. (#8 AWG MIN. CONDUCTOR SIZE)

DRAIN ROCK 1" MIN. - 2" MAX. AGGREGATE

DRAIN HOLE 1" MIN. - 2" MAX.

UL LISTED GROUND CLAMP SUITABLE FOR DIRECT BURIAL / CONCRETE ENCASEMENT BELOW GRADE APPLICATION (TYP.)

DIMENSION A: 1" MIN., 2" MAX. (TYP. - ALL CONDUITS)
 B: 1" MIN., 2" MAX. ABOVE GROUT (TYP. - ALL CONDUITS)

NOTES:

1. SEE NOTES DRAWINGS E-04, E-05, E-06, AND E-37.
2. PROVIDE 3' OF SLACK IN ALL CONDUCTORS IN ACCORDANCE WITH SPECIFICATIONS. (SLACK NOT SHOWN).

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**UNDERGROUND STREETLIGHT SERVICE
 TYPE IB - 240V**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

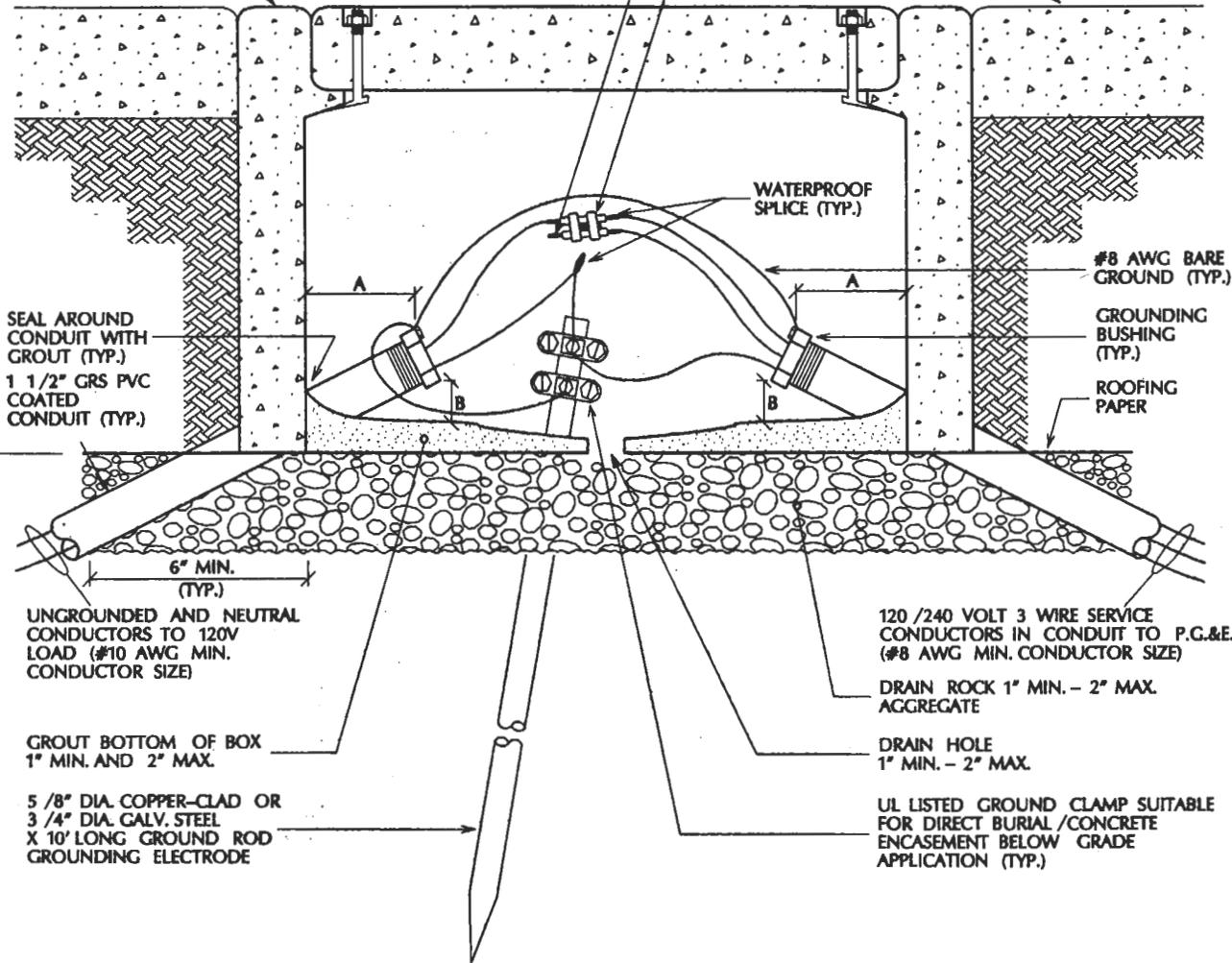
E-34

#3 1/2 PRECAST CONCRETE BOX MIN., WITH LID MARKED "CSJ SERVICE", OR SIZED AS SPECIFIED ON DRAWINGS

TAPE UNUSED PORTION OF CONNECTOR TO PROVIDE A WATERTIGHT SEAL (FOR FUTURE 240V USE)

WATERPROOF 2 POLE FUSED SPLICE CONNECTOR RATED 30A, 600V WITH ONE 30A FUSE

SIDEWALK OR TOP OF CURB GRADE



SEAL AROUND CONDUIT WITH GROUT (TYP.)
1 1/2" GRS PVC COATED CONDUIT (TYP.)

WATERPROOF SPLICE (TYP.)

#8 AWG BARE GROUND (TYP.)
GROUNDING BUSHING (TYP.)
ROOFING PAPER

1/2" MIN. A

UNGROUND AND NEUTRAL CONDUCTORS TO 120V LOAD (#10 AWG MIN. CONDUCTOR SIZE)

120/240 VOLT 3 WIRE SERVICE CONDUCTORS IN CONDUIT TO P.G.&E. (#8 AWG MIN. CONDUCTOR SIZE)

DRAIN ROCK 1" MIN. - 2" MAX. AGGREGATE

GROUT BOTTOM OF BOX 1" MIN. AND 2" MAX.

DRAIN HOLE 1" MIN. - 2" MAX.

5/8" DIA. COPPER-CLAD OR 3/4" DIA. GALV. STEEL X 10' LONG GROUND ROD GROUNDING ELECTRODE

UL LISTED GROUND CLAMP SUITABLE FOR DIRECT BURIAL / CONCRETE ENCASEMENT BELOW GRADE APPLICATION (TYP.)

DIMENSION A: 1" MIN., 2" MAX. (TYP. - ALL CONDUITS)
B: 1" MIN., 2" MAX. ABOVE GROUT (TYP. - ALL CONDUITS)

NOTES:

1. SEE NOTES DRAWINGS E-04, E-05, E-06, AND E-37.
2. PROVIDE 3' OF SLACK IN ALL CONDUCTORS IN ACCORDANCE WITH SPECIFICATIONS. (SLACK NOT SHOWN).

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UNDERGROUND STREETLIGHT SERVICE
TYPE IC - 120V

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-35

#3 1/2 PRECAST CONCRETE BOX MIN., WITH LID MARKED "CSJ SERVICE", OR SIZED AS SPECIFIED ON DRAWINGS

WATERPROOF 2 POLE FUSED SPLICE CONNECTOR RATED 30A, 600V WITH TWO 30A FUSES

SIDEWALK OR TOP OF CURB GRADE

WATERPROOF SPLICE (TYP.)

36" TAIL WITH TAPED END

#8 AWG BARE GROUND (TYP.)

GROUNDING BUSHING (TYP.)

ROOFING PAPER

SEAL AROUND CONDUIT WITH GROUT (TYP.)
1 1/2" GRS PVC COATED CONDUIT (TYP.)

6" MIN.

6" MIN. (TYP.)

2 UNGROUNDED CONDUCTORS TO 240V LOAD (#10 AWG MIN. CONDUCTOR SIZE)

GROUT BOTTOM OF BOX 1" MIN. AND 2" MAX.

5/8" DIA. COPPER-CLAD OR 3/4" DIA. GALV. STEEL X 10' LONG GROUND ROD GROUNDING ELECTRODE

120/240 VOLT 3 WIRE SERVICE CONDUCTORS IN CONDUIT TO P.G.&E. (#8 AWG MIN. CONDUCTOR SIZE)

DRAIN ROCK 1" MIN. - 2" MAX. AGGREGATE

DRAIN HOLE 1" MIN. - 2" MAX.

UL LISTED GROUND CLAMP SUITABLE FOR DIRECT BURIAL/CONCRETE ENCASUREMENT BELOW GRADE APPLICATION (TYP.)

DIMENSION A: 1" MIN., 2" MAX. (TYP. - ALL CONDUITS)
B: 1" MIN., 2" MAX. ABOVE GROUT (TYP. - ALL CONDUITS)

NOTES:

1. SEE NOTES DRAWINGS E-04, E-05, E-06, AND E-37.
2. PROVIDE 3' OF SLACK IN ALL CONDUCTORS IN ACCORDANCE WITH SPECIFICATIONS. (SLACK NOT SHOWN).

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DATE

3/3/92

UNDERGROUND STREETLIGHT SERVICE
TYPE ID - 240V

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-36

1. ALL MATERIALS AND WORK SHALL COMPLY WITH CITY OF SAN JOSE STANDARD PLANS AND SPECIFICATIONS.
2. SEE STANDARD PLAN DETAIL E-02 AND E-03 FOR BOX REQUIREMENTS.
3. SEE STANDARD PLAN DETAIL E-53 FOR FUSE AND CONNECTOR REQUIREMENTS.
4. ALL SERVICES SHALL BE LOCATED WITHIN CITY RIGHT-OF-WAY.
5. EXTEND ROCK CUSHION A MINIMUM OF 6 INCHES BEYOND INSIDE EDGE OF BOX.
6. CONDUITS SHALL TERMINATE NOT MORE THAN 2 INCHES AND NOT LESS THAN 1 INCH INSIDE THE BOX, AND SHALL BE NOT LESS THAN 1 INCH NOR MORE THAN 2 INCHES CLEAR FROM THE BOTTOM OF THE BOX.
7. CONDUITS SHALL ENTER THE BOX WITH MANUFACTURED LONG RADII TYPE OR STANDARD 45° ELBOWS.
8. GROUT AROUND ALL CONDUITS ENTERING BOX TO FORM A TIGHT SEAL BETWEEN CONDUITS AND BOX.
9. FACTORY BOTTOM WITH 1" DRAIN HOLE IS ACCEPTABLE IN LIEU OF GROUTED BOTTOM AND ROOFING PAPER.
10. ALL CURRENT CARRYING CONDUCTORS ARE TO HAVE THW INSULATION, UNLESS NOTED OTHERWISE.
11. PROVIDE AT LEAST 3 FEET OF SLACK FOR EACH CONDUCTOR OUTSIDE OF BOX.
12. WHEN SERVICE FEEDS A SINGLE ELECTROLIER AND IS WITHIN 10' OF ELECTROLIER THEN REDUCE SERVICE FUSE TO 10 AMPERES AND DELETE FUSE IN BASE OF POLE.
13. WHEN SERVICE FEEDS A SINGLE ELECTROLIER AND IS WITHIN 10' OF ELECTROLIER THEN PULL BOX AT BASE OF ELECTROLIER MAY BE DELETED.

APPROVED BY 	<p style="text-align: center;">U.G. STREETLIGHT SERVICE TYPE I A, B, C, D SERIES - NOTES</p>		DRAWING NO.
DATE 3/3/92			E-37
DEPARTMENT OF PUBLIC WORKS			

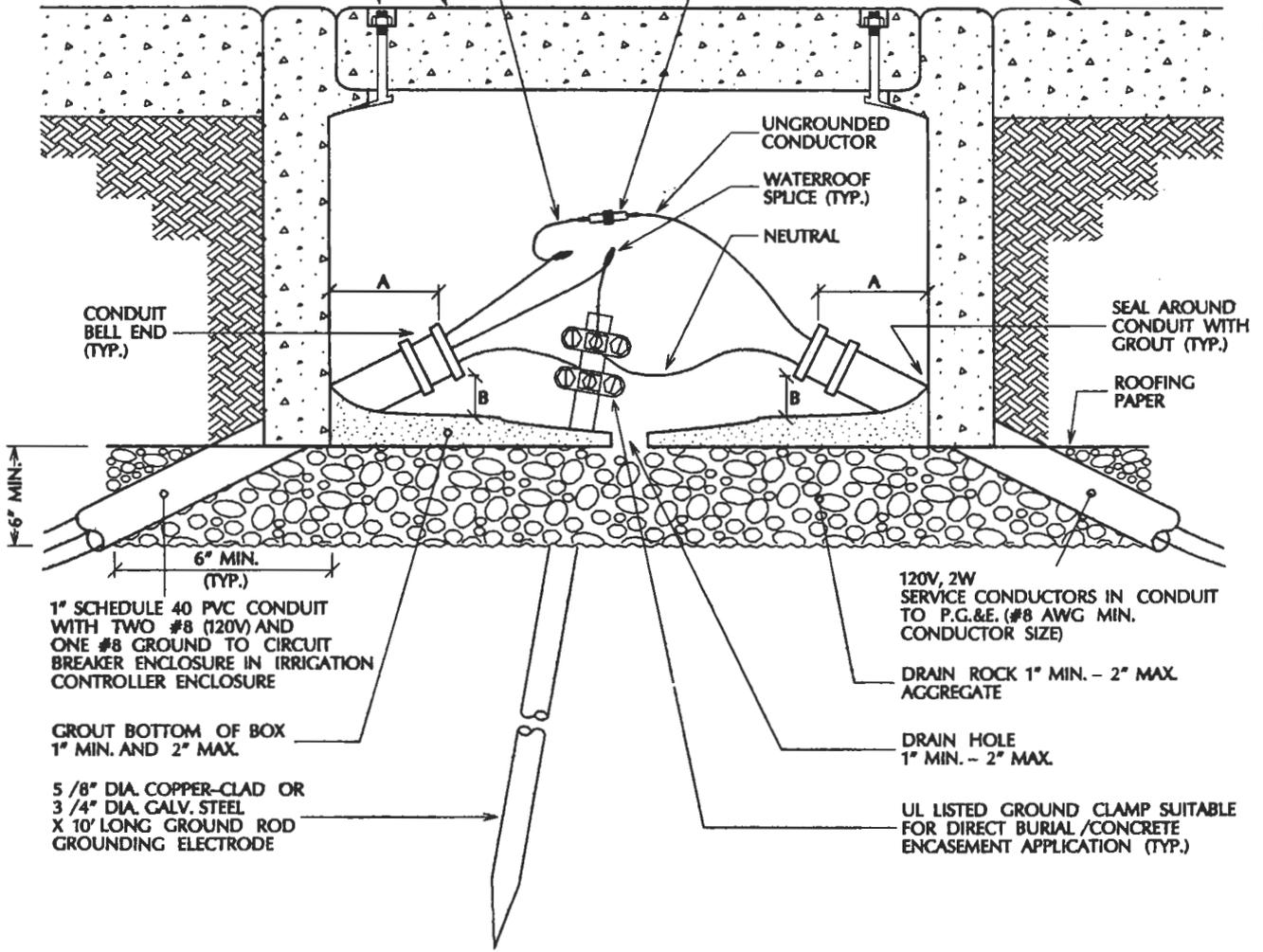
IDENTIFY CONDUCTORS AS "IRRIGATION" CIRCUIT

CITY OF SAN JOSE #3 1/2 PRECAST CONCRETE BOX WITH LID MARKED "CSJ SERVICE"

3/8" BRASS HOLD DOWN BOLT, NUT AND WASHER RECESSED IN COVER (2 PER BOX)

WATERPROOF 1 POLE FUSED SPLICE CONNECTOR RATED 30A, 600V WITH 15A FUSE

SIDEWALK OR TOP OF CURB GRADE



CONDUIT BELL END (TYP.)

UNGROUND
CONDUCTOR
WATERPROOF
SPLICE (TYP.)
NEUTRAL

SEAL AROUND
CONDUIT WITH
GROUT (TYP.)
ROOFING
PAPER

6" MIN.

1" SCHEDULE 40 PVC CONDUIT WITH TWO #8 (120V) AND ONE #8 GROUND TO CIRCUIT BREAKER ENCLOSURE IN IRRIGATION CONTROLLER ENCLOSURE

120V, 2W SERVICE CONDUCTORS IN CONDUIT TO P.G.&E. (#8 AWG MIN. CONDUCTOR SIZE)

GROUT BOTTOM OF BOX 1" MIN. AND 2" MAX.

DRAIN ROCK 1" MIN. - 2" MAX. AGGREGATE

5/8" DIA. COPPER-CLAD OR 3/4" DIA. GALV. STEEL X 10' LONG GROUND ROD GROUNDING ELECTRODE

DRAIN HOLE 1" MIN. - 2" MAX.

UL LISTED GROUND CLAMP SUITABLE FOR DIRECT BURIAL /CONCRETE ENCASUREMENT APPLICATION (TYP.)

DIMENSION A: 1" MIN., 2" MAX. (TYP. - ALL CONDUITS)
" B: 1" MIN, 2" MAX. ABOVE GROUT (TYP. - ALL CONDUITS)

NOTES:

1. ALL WORK SHALL COMPLY WITH CITY OF SAN JOSE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
2. IF RIGID STEEL CONDUIT IS PRESENT, BONDING SHALL BE AS PER CITY OF SAN JOSE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. PROVIDE 3' OF SLACK IN ALL CONDUCTORS IN ACCORDANCE WITH SPECIFICATIONS. (SLACK NOT SHOWN).
4. SEE NOTES DRAWINGS E-04, E-05, E-06, AND E-37.

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3/3/92

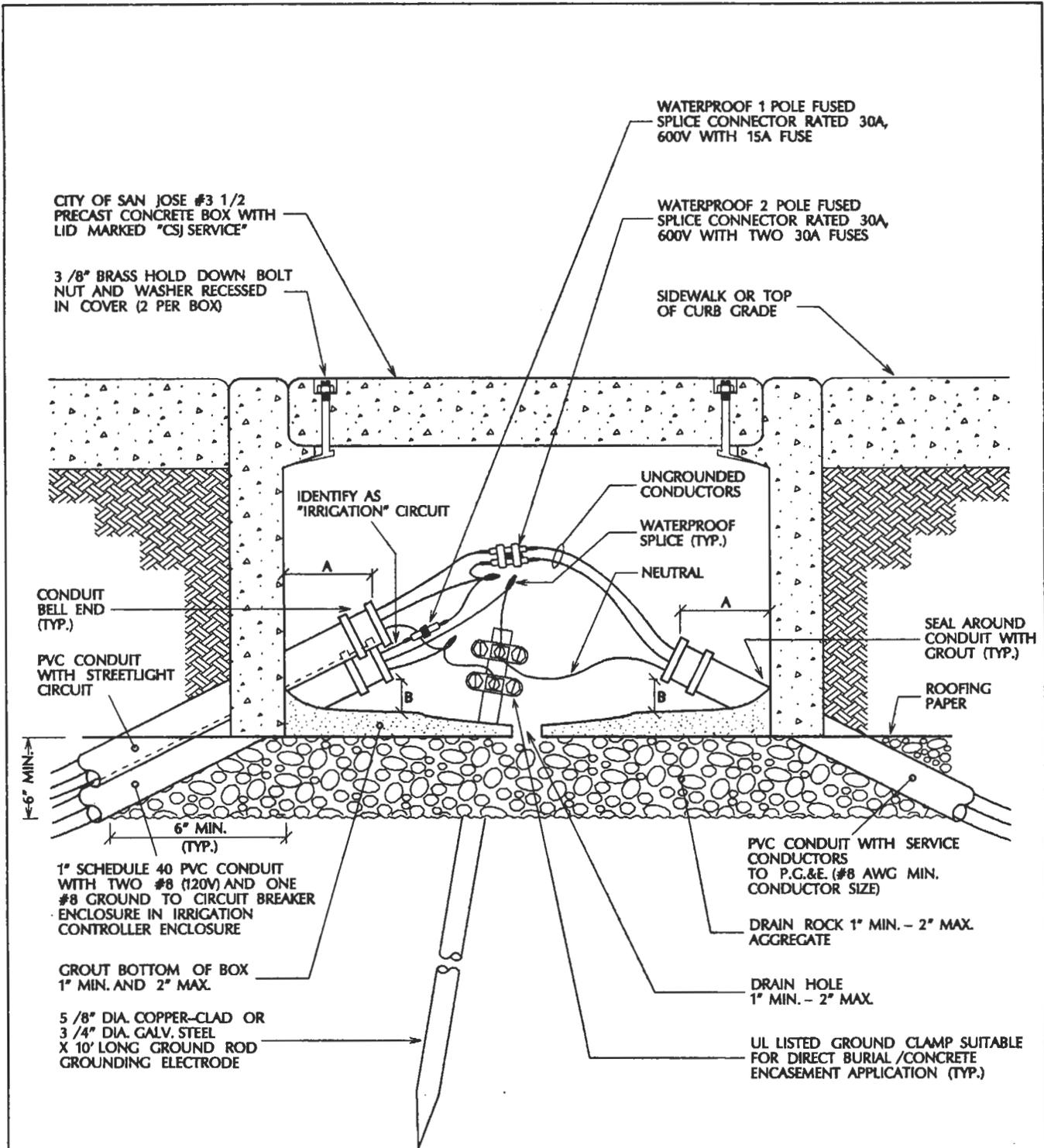
UNDERGROUND IRRIGATION CONTROLLER SERVICE

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-38



CITY OF SAN JOSE #3 1/2
 PRECAST CONCRETE BOX WITH
 LID MARKED "CSJ SERVICE"

3/8" BRASS HOLD DOWN BOLT
 NUT AND WASHER RECESSED
 IN COVER (2 PER BOX)

WATERPROOF 1 POLE FUSED
 SPLICE CONNECTOR RATED 30A,
 600V WITH 15A FUSE

WATERPROOF 2 POLE FUSED
 SPLICE CONNECTOR RATED 30A,
 600V WITH TWO 30A FUSES

SIDEWALK OR TOP
 OF CURB GRADE

IDENTIFY AS
 "IRRIGATION" CIRCUIT

UNGROUND
 CONDUCTORS

WATERPROOF
 SPLICE (TYP.)

NEUTRAL

CONDUIT
 BELL END
 (TYP.)

PVC CONDUIT
 WITH STREETLIGHT
 CIRCUIT

SEAL AROUND
 CONDUIT WITH
 GROUT (TYP.)

ROOFING
 PAPER

1/4" MIN. - A

6" MIN. (TYP.)

1" SCHEDULE 40 PVC CONDUIT
 WITH TWO #8 (120V) AND ONE
 #8 GROUND TO CIRCUIT BREAKER
 ENCLOSURE IN IRRIGATION
 CONTROLLER ENCLOSURE

PVC CONDUIT WITH SERVICE
 CONDUCTORS
 TO P.C.&E. (#8 AWG MIN.
 CONDUCTOR SIZE)

DRAIN ROCK 1" MIN. - 2" MAX.
 AGGREGATE

GROUT BOTTOM OF BOX
 1" MIN. AND 2" MAX.

DRAIN HOLE
 1" MIN. - 2" MAX.

5/8" DIA. COPPER-CLAD OR
 3/4" DIA. GALV. STEEL
 X 10' LONG GROUND ROD
 GROUNDING ELECTRODE

UL LISTED GROUND CLAMP SUITABLE
 FOR DIRECT BURIAL / CONCRETE
 ENCASEMENT APPLICATION (TYP.)

DIMENSION A: 1" MIN., 2" MAX. (TYP. - ALL CONDUITS)
 B: 1" MIN, 2" MAX. ABOVE GROUT (TYP. - ALL CONDUITS)

- NOTES:
1. IF PULLBOX IS EXISTING, THE GROUT SHALL BE REPAIRED.
 2. IF RIGID STEEL CONDUIT IS PRESENT, BONDING SHALL BE AS PER CITY OF SAN JOSE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
 3. ALL WORK SHALL COMPLY WITH CITY OF SAN JOSE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. PROVIDE 3' OF SLACK IN ALL CONDUCTORS IN ACCORDANCE WITH SPECIFICATIONS. (SLACK NOT SHOWN).
 4. SEE NOTES DRAWINGS E-04, E-05, E-06, AND E-37.

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 3/3/92

**IRRIGATION CONTROLLER CONNECTION
 AT UNDERGROUND
 STREETLIGHT SERVICE**

DEPARTMENT OF PUBLIC WORKS



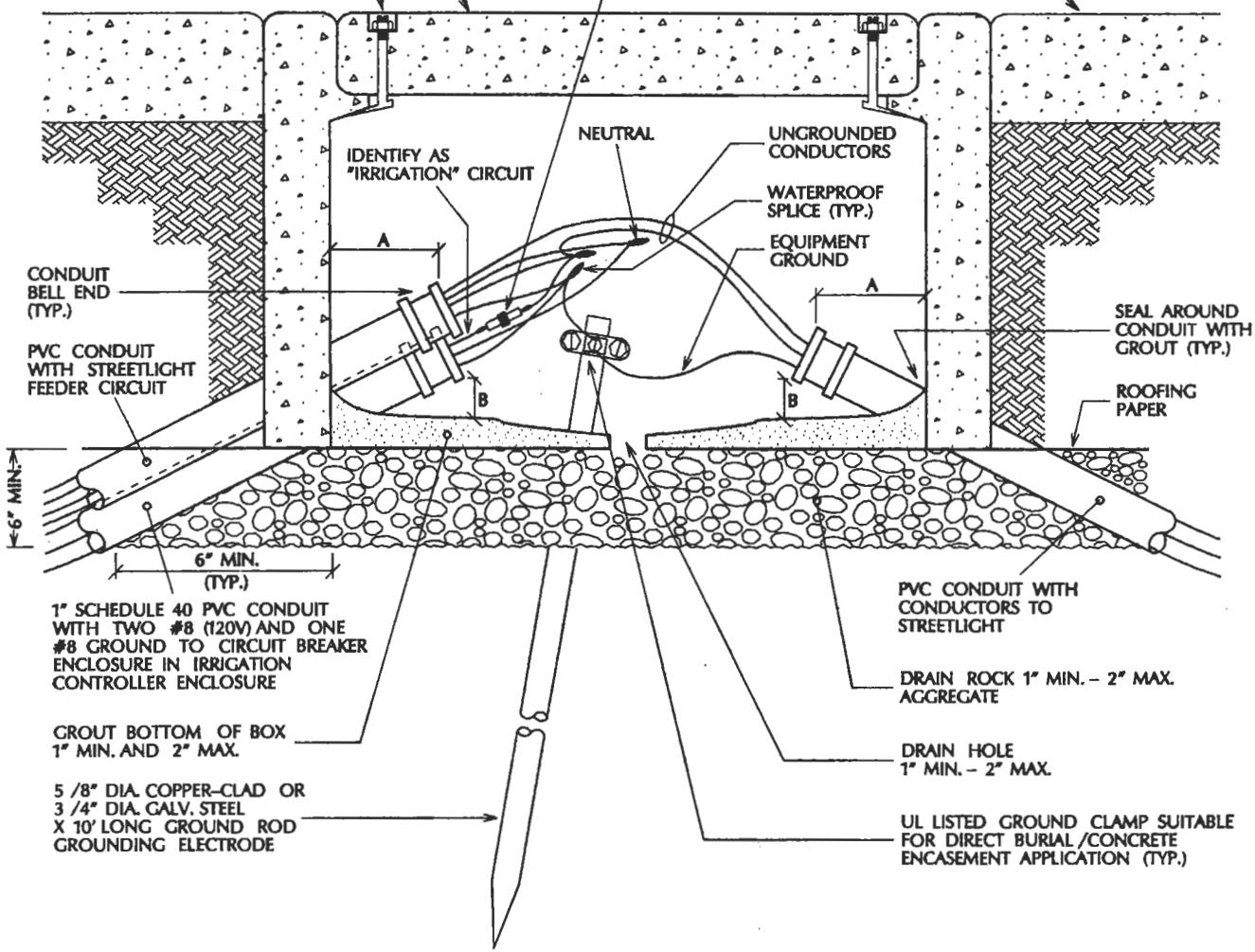
DRAWING
 NO.
 E-39

CITY OF SAN JOSE #3 1/2
 PRECAST CONCRETE BOX WITH
 LID MARKED "CSJ ELECTRICAL"

3/8" BRASS HOLD DOWN BOLT
 NUT AND WASHER RECESSED
 IN COVER (2 PER BOX)

WATERPROOF 1 POLE FUSED
 SPLICE CONNECTOR RATED 30A,
 600V WITH 15A FUSE

SIDEWALK OR TOP
 OF CURB GRADE



CONDUIT
 BELL END
 (TYP.)

PVC CONDUIT
 WITH STREETLIGHT
 FEEDER CIRCUIT

IDENTIFY AS
 "IRRIGATION" CIRCUIT

NEUTRAL

UNGROUND
 ED CONDUCTORS

WATERPROOF
 SPLICE (TYP.)

EQUIPMENT
 GROUND

SEAL AROUND
 CONDUIT WITH
 GROUT (TYP.)

ROOFING
 PAPER

6" MIN.

6" MIN.
 (TYP.)

1" SCHEDULE 40 PVC CONDUIT
 WITH TWO #8 (120V) AND ONE
 #8 GROUND TO CIRCUIT BREAKER
 ENCLOSURE IN IRRIGATION
 CONTROLLER ENCLOSURE

GROUT BOTTOM OF BOX
 1" MIN. AND 2" MAX.

5/8" DIA. COPPER-CLAD OR
 3/4" DIA. GALV. STEEL
 X 10' LONG GROUND ROD
 GROUNDING ELECTRODE

PVC CONDUIT WITH
 CONDUCTORS TO
 STREETLIGHT

DRAIN ROCK 1" MIN. - 2" MAX.
 AGGREGATE

DRAIN HOLE
 1" MIN. - 2" MAX.

UL LISTED GROUND CLAMP SUITABLE
 FOR DIRECT BURIAL /CONCRETE
 ENCASEMENT APPLICATION (TYP.)

DIMENSION A: 1" MIN., 2" MAX. (TYP. - ALL CONDUITS)
 B: 1" MIN., 2" MAX. ABOVE GROUT (TYP. - ALL CONDUITS)

NOTES:

1. IF PULLBOX IS EXISTING, THE GROUT SHALL BE REPAIRED.
2. IF RIGID STEEL CONDUIT IS PRESENT, BONDING SHALL BE AS PER CITY OF SAN JOSE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. ALL WORK SHALL COMPLY WITH CITY OF SAN JOSE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
4. SPECIFIC SPLICING REQUIREMENTS DEPEND ON FIELD CONDITIONS.
5. IF GROUND ROD IS NOT PRESENT DUE TO FIELD CONDITIONS AND REQUIREMENTS, BONDING SHALL BE AS PER CITY OF SAN JOSE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
6. PROVIDE 3' OF SLACK IN ALL CONDUCTORS IN ACCORDANCE WITH SPECIFICATIONS. (SLACK NOT SHOWN).
7. SEE NOTES DRAWINGS E-04, E-05, E-06, AND E-37.

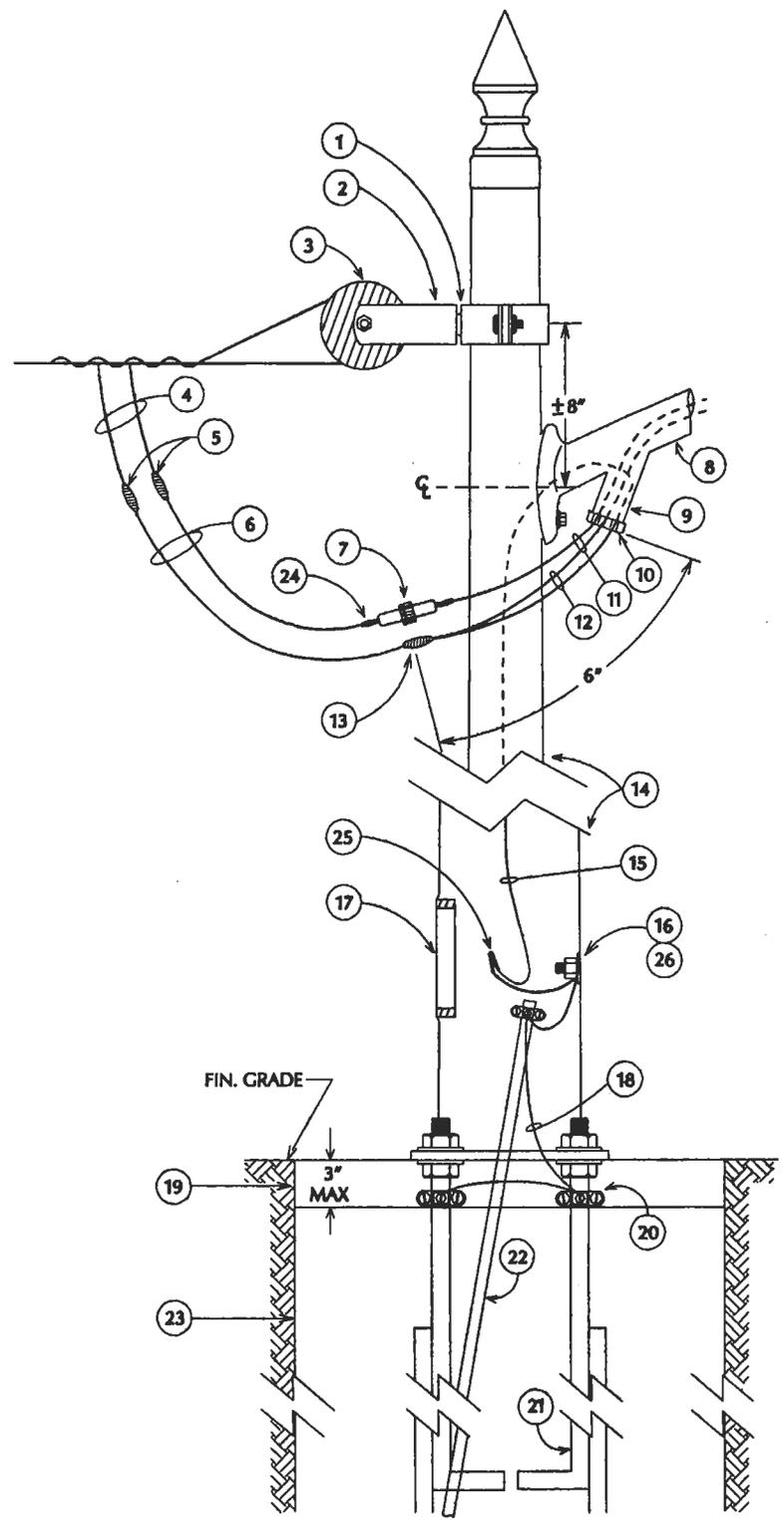
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 3/3/92

**IRRIGATION CONTROLLER CONNECTION
 TO UNDERGROUND
 STREETLIGHT CIRCUIT**
 DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
 E-40

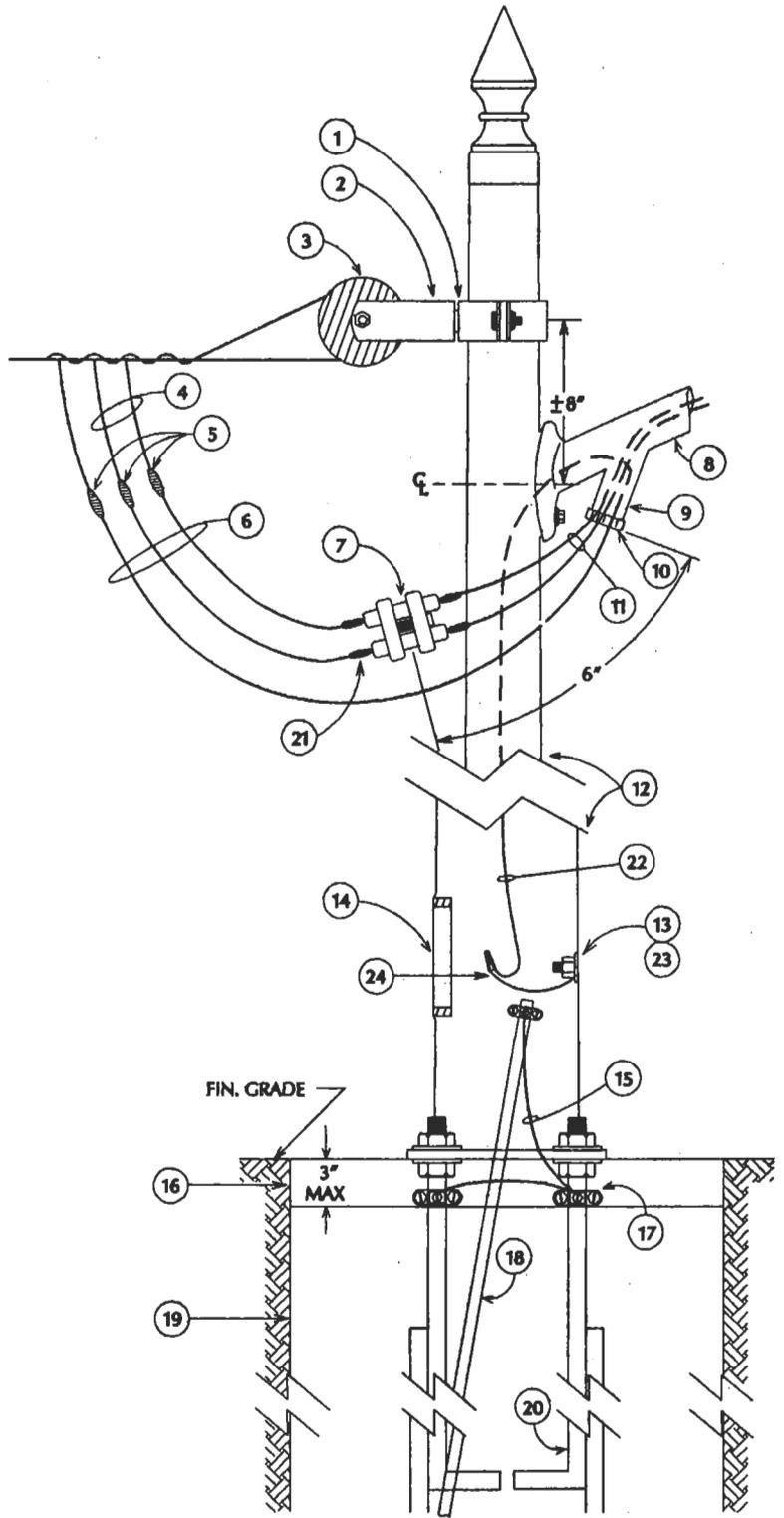
- ① 1/4" X 1 1/2" GALVANIZED STEEL POLE BAND WITH MOUNTING HARDWARE
- ② 3/16" X 1 1/2" GALVANIZED STEEL CLEVIS
- ③ 10KV, 1500 LB. TEST SPOOL
- ④ SERVICE DROP BY P.G.&E.
- ⑤ WATERPROOF SPLICES BY P.G.&E.
- ⑥ 2 #10 AWG X 24" LEADS MINIMUM
- ⑦ WATERPROOF SINGLE POLE FUSED SPLICE CONNECTOR RATED 30A, 600V WITH 10 A FUSE
- ⑧ MAST ARM
- ⑨ 1 1/2" DIA. IPS ENTRANCE NIPPLE
- ⑩ 1 1/2" DIA. INSULATING METAL BUSHING
- ⑪ 2 #10 AWG (120V) TO LUMINAIRE
- ⑫ 2 #10 AWG NEUTRALS, ONE TO LUMINAIRE AND ONE TO GROUNDING CLAMP ON GROUND ROD VIA POLE GROUNDING LUG
- ⑬ C-TAP WATERPROOF SPLICE
- ⑭ POLE
- ⑮ #10 AWG NEUTRAL CONDUCTOR
- ⑯ 1/2" - N.C. SQ. HD. CAP SCREW X 1" LONG GROUNDING LUG W/HEX NUT AND FLAT WASHER
- ⑰ HANDHOLE WITH COVER
- ⑱ #8 AWG BARE BONDING CONDUCTOR TO ALL ANCHOR BOLT GROUNDING CLAMPS
- ⑲ PCC FOUNDATION CAP
- ⑳ GROUNDING CLAMP (TYP.) UL LISTED AS SUITABLE FOR CONCRETE ENCASEMENT OR DIRECT BURIAL; INSTALL GROUNDING CLAMPS ON ALL ANCHOR BOLTS
- ㉑ GALV. ANCHOR BOLT (TYP.)
- ㉒ 5/8" X 10' COPPERCLAD OR 3/4" X 10' GALVANIZED GROUND ROD; INSTALL TOP OF GROUND ROD EVEN W/BOTTOM OF HANDHOLE OPENING
- ㉓ PCC FOUNDATION
- ㉔ WATERPROOF SPLICE (TYP.)
- ㉕ SPLICE
- ㉖ TERMINATE BONDING CONDUCTOR WITH UL APPROVED GROUNDING LUG



NOTE:
THE GROUND ROD SHALL BE INSTALLED OBLIQUELY THROUGH THE FOUNDATION IN UNDISTURBED SOIL.

APPROVED BY 	<h2 style="margin: 0;">120V OVERHEAD STREETLIGHT SERVICE - TYPE IIA</h2>		DRAWING NO. <h3 style="margin: 0;">E-41</h3>
DATE 3/3/92	DEPARTMENT OF PUBLIC WORKS		

- ① 1/4" X 1 1/2" GALVANIZED STEEL POLE BAND WITH MOUNTING HARDWARE
- ② 3/16" X 1 1/2" GALVANIZED STEEL CLEVIS
- ③ 10KV, 1500 LB. TEST SPOOL
- ④ SERVICE DROP BY P.G.&E.
- ⑤ WATERPROOF SPLICES BY P.G.&E.
- ⑥ 3 #10 AWG X 24" LEADS MINIMUM
- ⑦ WATERPROOF TWO POLE FUSED SPlice CONNECTOR RATED 30A, 600V WITH TWO 10 AMP FUSES
- ⑧ MAST ARM
- ⑨ 1 1/2" DIA. IPS ENTRANCE NIPPLE
- ⑩ 1 1/2" DIA. INSULATING BUSHING
- ⑪ 2 #10 AWG (240V) TO LUMINAIRE
- ⑫ POLE
- ⑬ 1/2" - N.C. SQ. HD. CAP SCREW X 1" GROUNDING LUG W/HEX NUT AND FLAT WASHER
- ⑭ HANDHOLE W/COVER
- ⑮ #8 AWG BARE BONDING CONDUCTOR TO ALL ANCHOR BOLT GROUNDING CLAMPS
- ⑯ PCC FOUNDATION CAP
- ⑰ GROUNDING CLAMP (TYP.) UL LISTED AS SUITABLE FOR CONCRETE ENCASEMENT OR DIRECT BURIAL; INSTALL GROUNDING CLAMPS ON ALL ANCHOR BOLTS
- ⑱ 5/8" X 10' COPPERCLAD OR 3/4" X 10' GALVANIZED GROUND ROD; INSTALL TOP OF GROUND ROD EVEN W/BOTTOM OF HANDHOLE OPENING
- ⑲ PCC FOUNDATION
- ⑳ GALV. ANCHOR BOLT (TYP.)
- ㉑ WATERPROOF SPLICE (TYP.)
- ㉒ #10 AWG NEUTRAL CONDUCTOR
- ㉓ TERMINATE BONDING CONDUCTOR WITH UL APPROVED GROUNDING LUG
- ㉔ SPLICE



NOTE:
THE GROUND ROD SHALL BE INSTALLED OBLIQUELY THROUGH THE FOUNDATION IN UNDISTURBED SOIL.

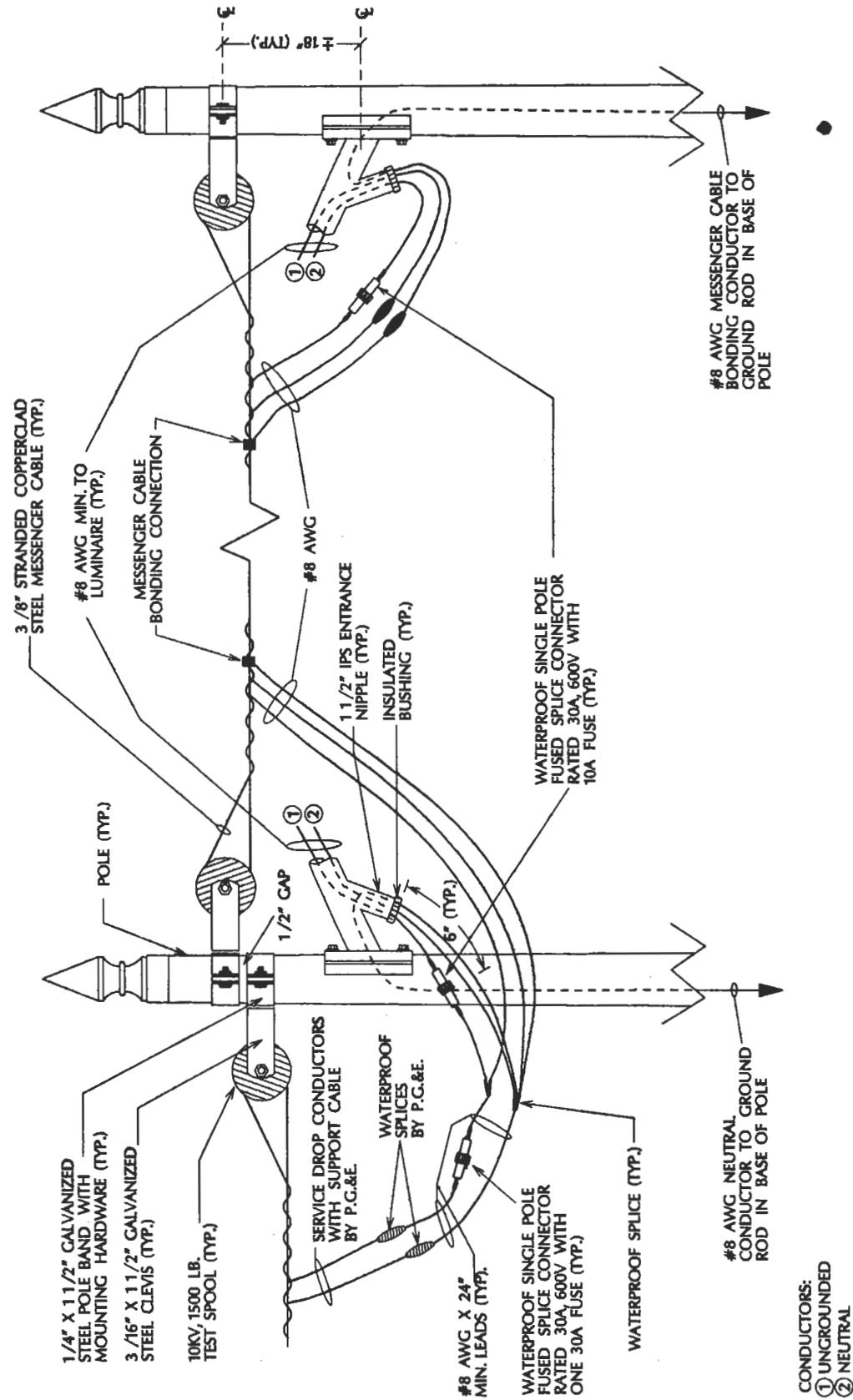
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DATE
3/3/92

240V OVERHEAD STREETLIGHT SERVICE - TYPE IIB

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
E-42



CONDUCTORS:
 ① UNGROUNDED
 ② NEUTRAL

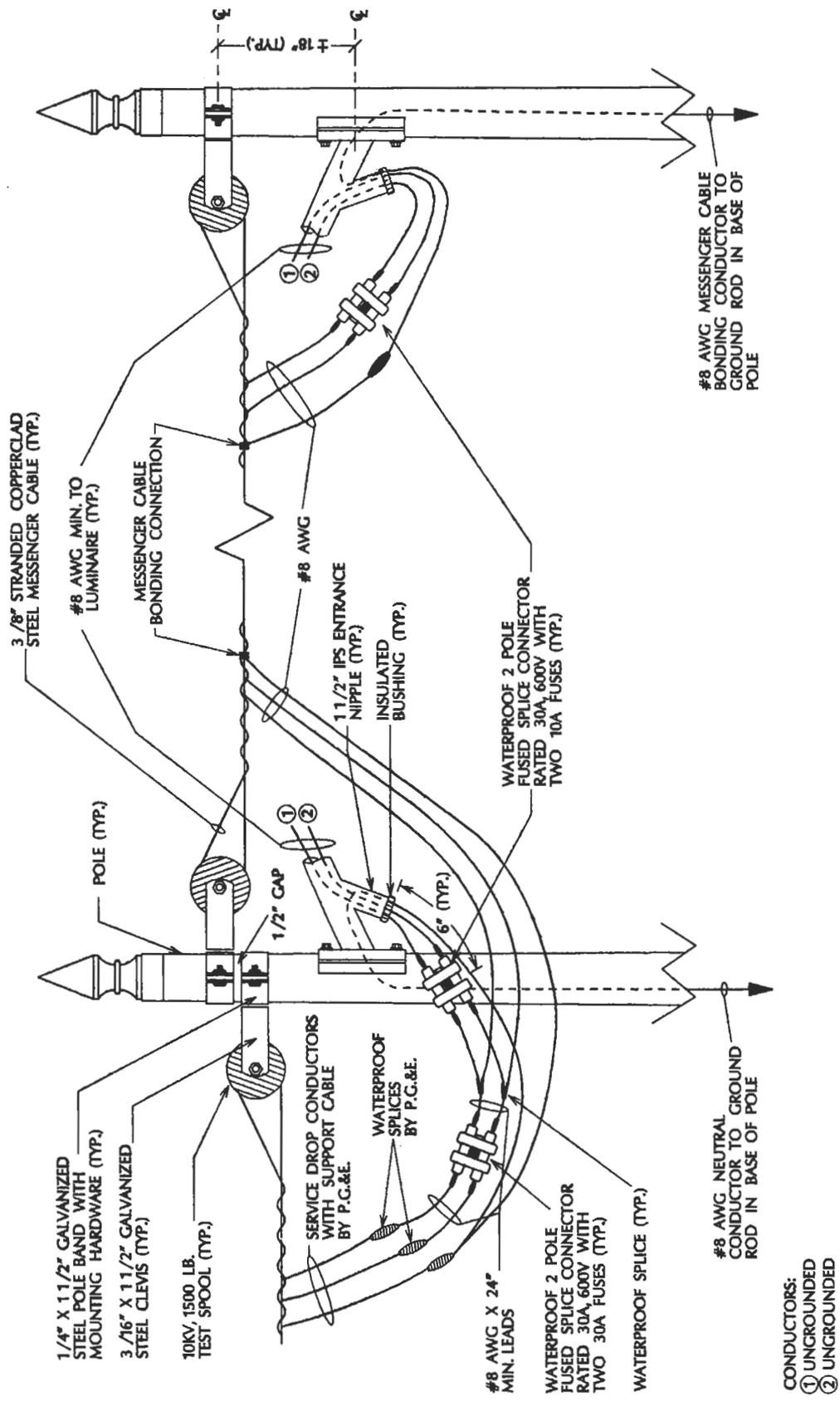
NOTES:
 1. SEE DWGS. E-41 AND E-42 FOR POLE GROUNDING REQUIREMENTS.
 2. SEE DWG. E-45 FOR NOTES.
 3. GROUND THE MESSENGER AS REQUIRED BY NATIONAL ELECTRICAL CODE.

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 DATE
 3/3/92

**120V OVERHEAD MULTIPLE STREETLIGHT
 SERVICE TYPE - IIC**
 DEPARTMENT OF PUBLIC WORKS



**DRAWING
 NO.
 E-43**



CONDUCTORS:
 ① UNGROUNDED
 ② UNGROUNDED

NOTES:
 1. SEE DRAWINGS E-41 AND E-42 FOR POLE GROUNDING REQUIREMENTS.
 2. SEE DRAWING E-45 FOR NOTES.
 3. GROUND THE MESSENGER AS REQUIRED BY NATIONAL ELECTRICAL CODE.

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 DATE
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**240V OVERHEAD MULTIPLE STREETLIGHT
 SERVICE TYPE - IID**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
E-44

1. INSTALL 5 /8" DIA. COPPER-CLAD OR 3 /4" DIA. GALV. STEEL X 10' LONG GROUND ROD IN FOUNDATION OF EACH POLE.
2. BOND ALL FOUR ANCHOR BOLTS.
3. TERMINATE NEUTRAL AND GROUNDING CONDUCTORS ON GROUND ROD IN BASE OF FIRST POLE RECEIVING P.G.&E. SERVICE.
4. TERMINATE GROUNDING CONDUCTORS ON GROUNDING LUG IN BASE OF ALL OTHER POLES.
5. APPLICATION: 120V OR 240V OVERHEAD SERVICE FEEDING MULTIPLE STREETLIGHTS.
6. GROUND THE MESSENGER AS REQUIRED BY NATIONAL ELECTRICAL CODE.

APPROVED BY

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DATE

3/3/92

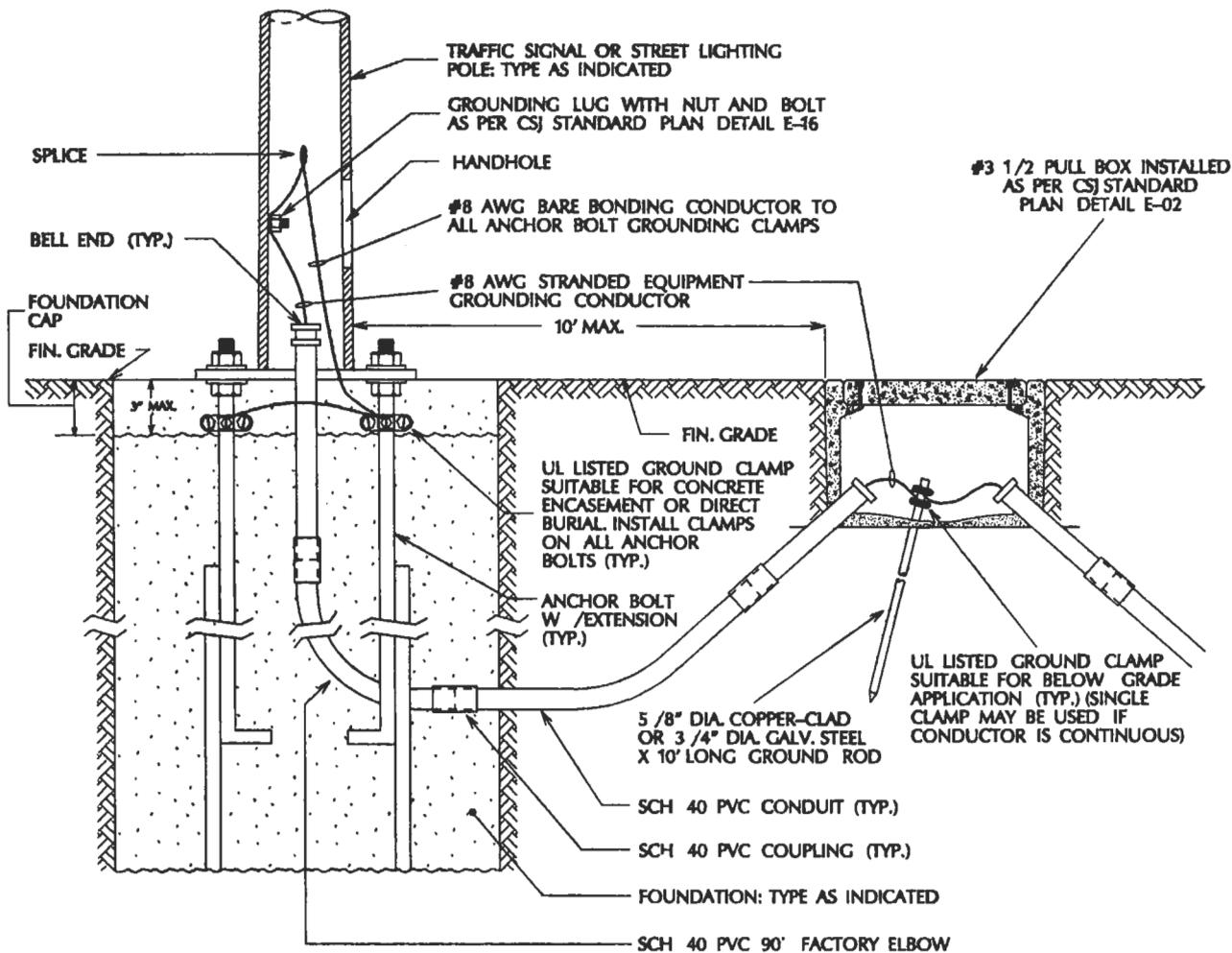
**OVERHEAD STREETLIGHT MULTIPLE
SERVICE TYPE IIC / IID - NOTES**

DEPARTMENT OF PUBLIC WORKS



DRAWING
NO.

E-45



NOTES:

1. BONDING /GROUNDING DETAIL FOR USE WITH SCH. 40 PVC CONDUIT AND PULL BOX WITHIN 10' FROM POLE.
2. THE GROUND ROD SHALL BE INSTALLED AT AN OBLIQUE ANGLE NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.
3. TERMINATE BONDING CONDUCTOR AT POLE GROUNDING LUG WITH UL APPROVED GROUNDING LUG.

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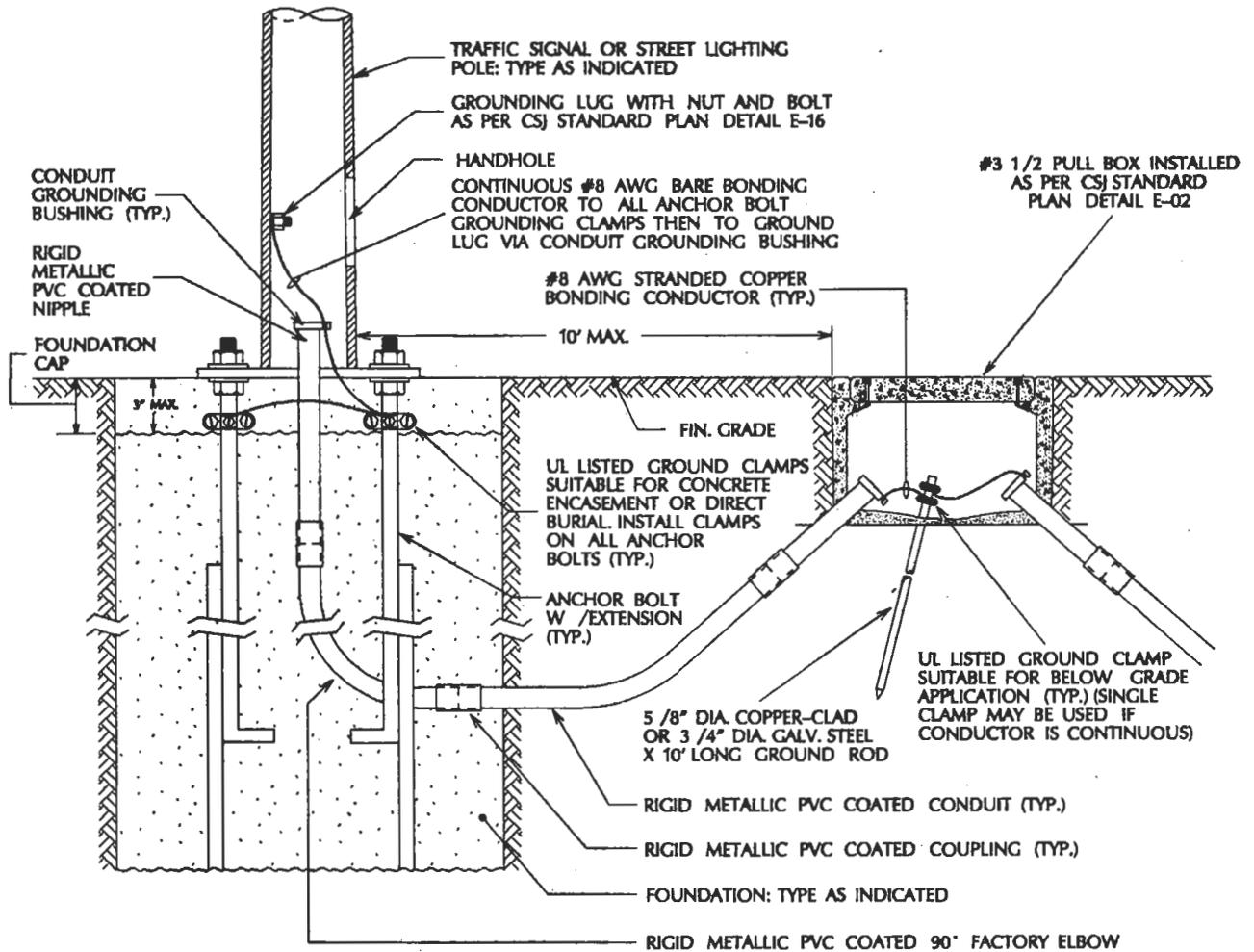
POLE BONDING - METHOD A

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-46



NOTES:

1. BONDING /GROUNDING DETAIL FOR USE WITH GALVANIZED RIGID STEEL PVC COATED CONDUIT AND PULL BOX WITHIN 10' FROM POLE.
2. THE GROUND ROD SHALL BE INSTALLED AT AN OBLIQUE ANGLE NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.
3. TERMINATE BONDING CONDUCTOR AT POLE GROUNDING LUG WITH UL APPROVED GROUNDING LUG.

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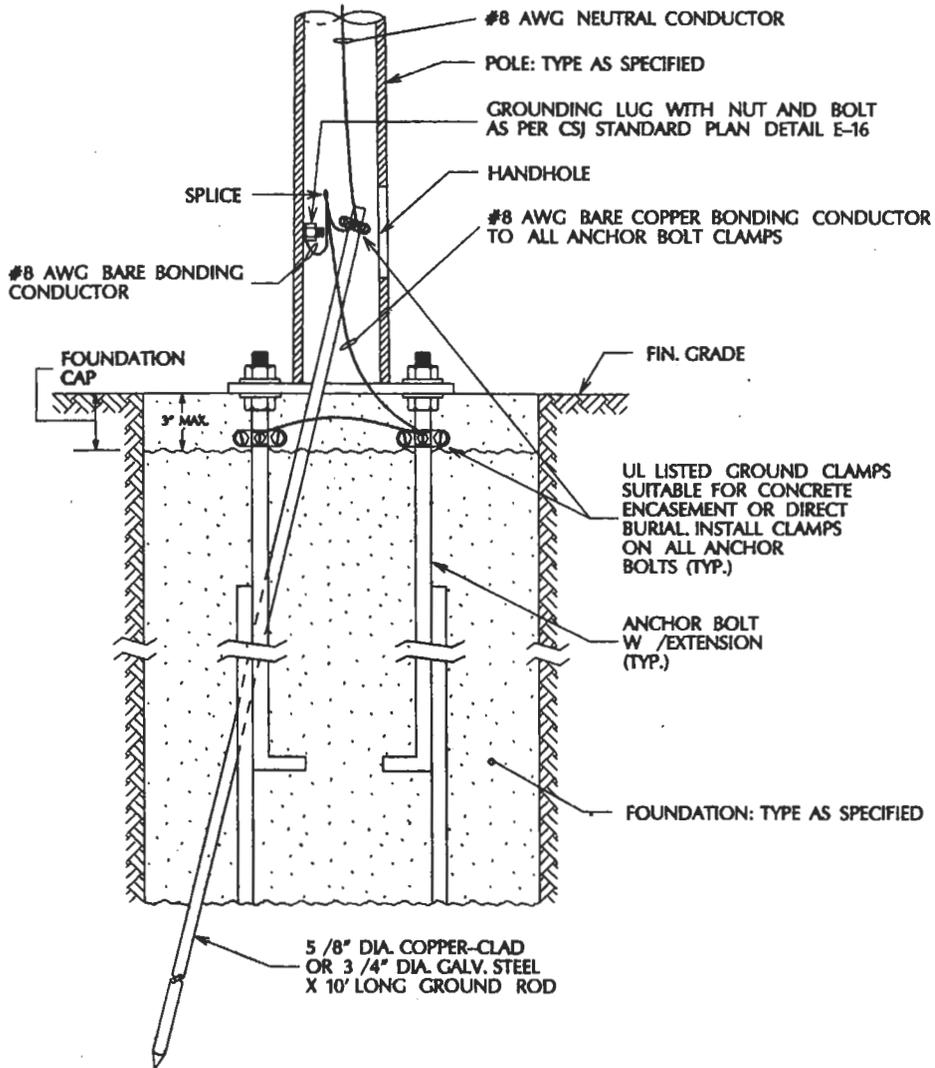
POLE BONDING - METHOD B

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-47



NOTES:

1. INSTALL TOP OF GROUND ROD EVEN WITH BOTTOM OF HANDHOLE OPENING.
2. THE GROUND ROD SHALL BE INSTALLED OBLIQUELY THROUGH THE FOUNDATION IN UNDISTURBED SOIL.
3. POLE BONDING METHOD 'C' SHALL BE USED FOR OVERHEAD FEED ONLY UNLESS APPROVED OTHERWISE BY THE ELECTRICAL ENGINEER.
4. TERMINATE BONDING CONDUCTOR AT POLE GROUNDING LUG WITH UL APPROVED GROUNDING LUG.

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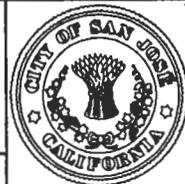
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3/3/92

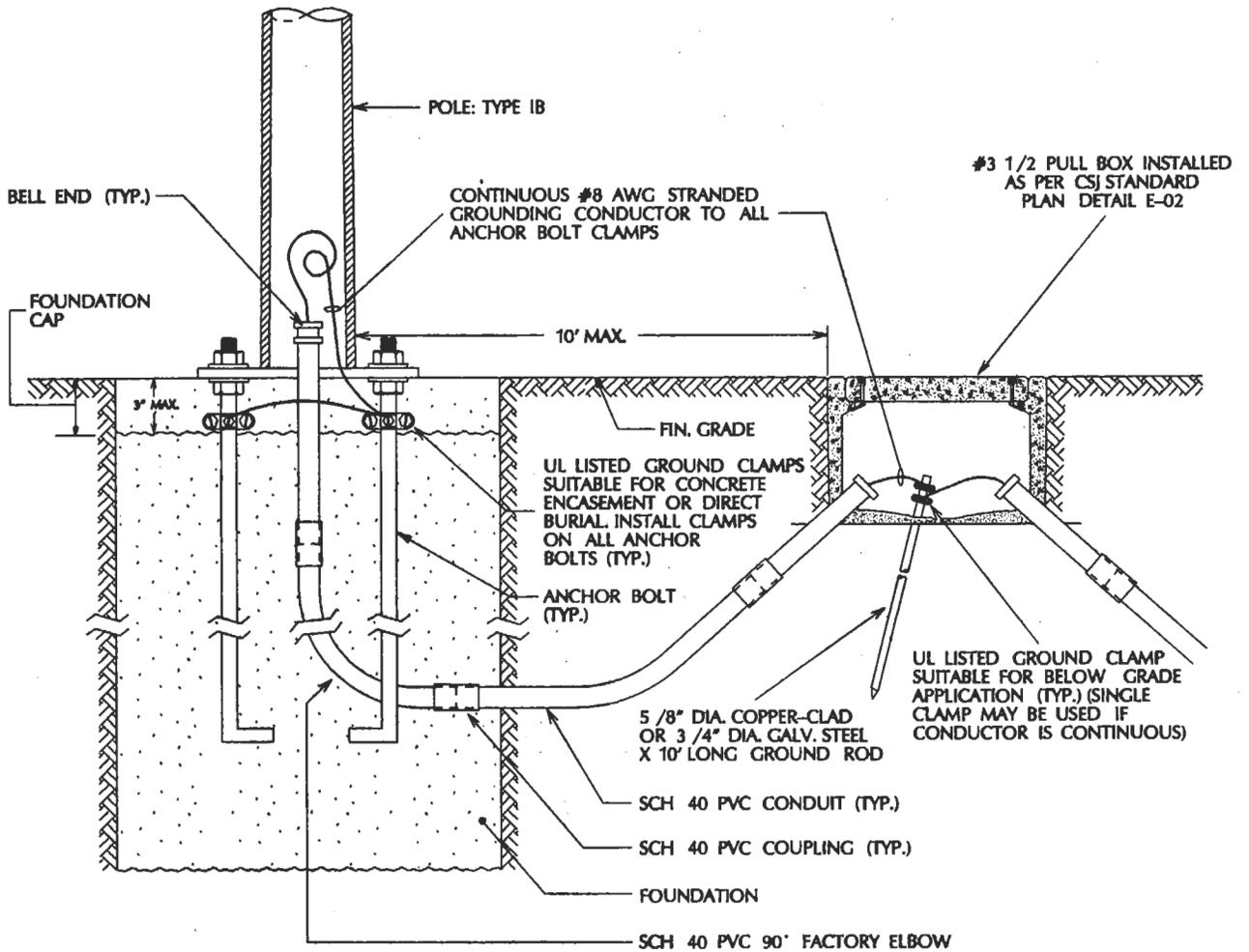
POLE BONDING - METHOD C

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-48



NOTES:

1. BONDING /GROUNDING DETAIL FOR USE WITH SCH. 40 PVC CONDUIT AND PULL BOX WITHIN 10' FROM POLE.
2. THE GROUND ROD SHALL BE INSTALLED AT AN OBLIQUE ANGLE NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.
3. POLE STANDARD TYPE 1B AND FOUNDATION REQUIREMENTS SHALL CONFORM TO SECTION 86-2.04 OF THE STATE SPECIFICATIONS AND STATE STANDARD PLAN DETAILS (LATEST ENFORCED ISSUE).

APPROVED BY

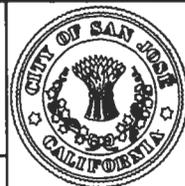
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DATE

3/3/92

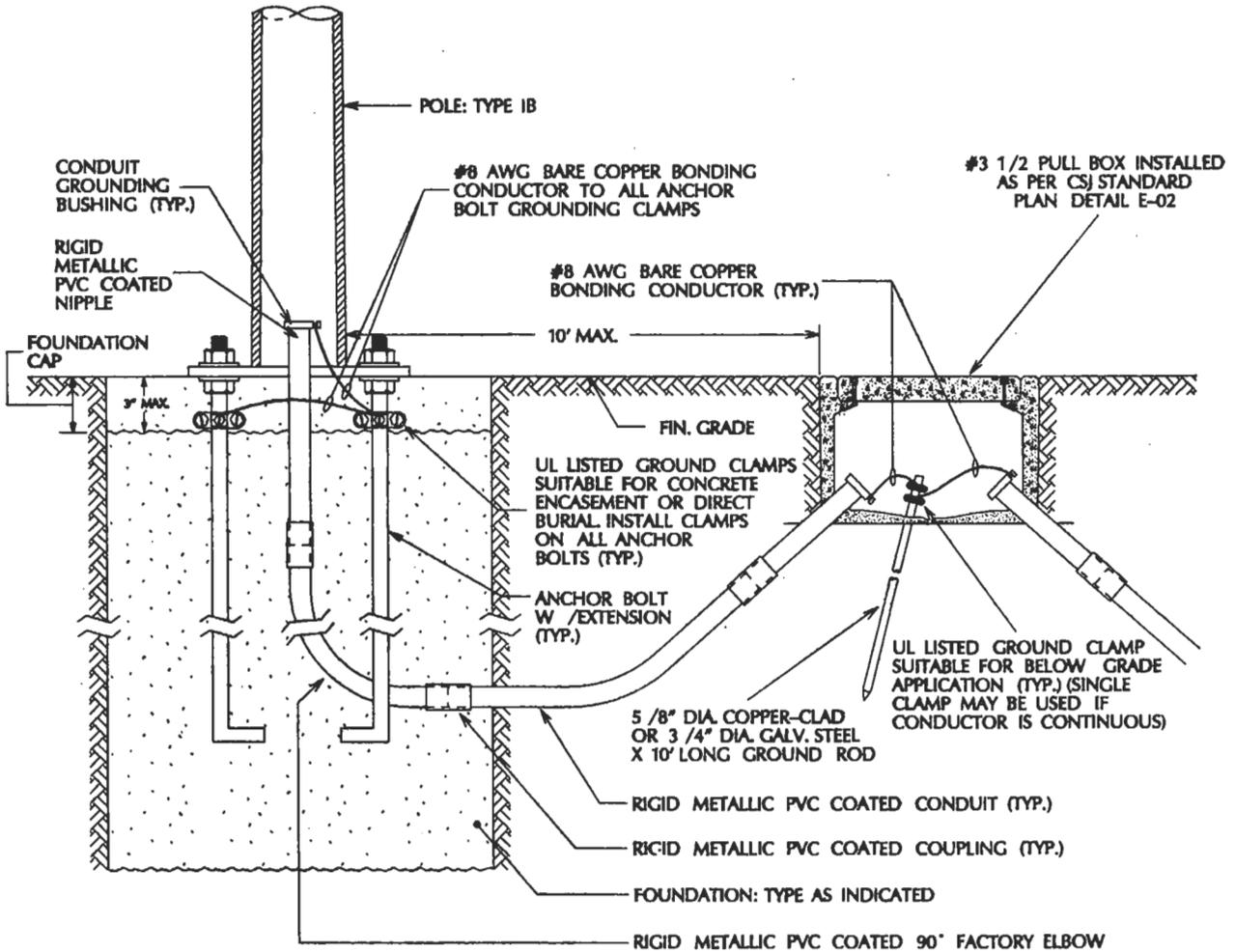
POLE TYPE 1B BONDING - METHOD A

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-49



NOTES:

1. BONDING /GROUNDING DETAIL FOR USE WITH GALVANIZED RIGID STEEL PVC COATED CONDUIT AND PULL BOX WITHIN 10' FROM POLE.
2. THE GROUND ROD SHALL BE INSTALLED AT AN OBLIQUE ANGLE NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.

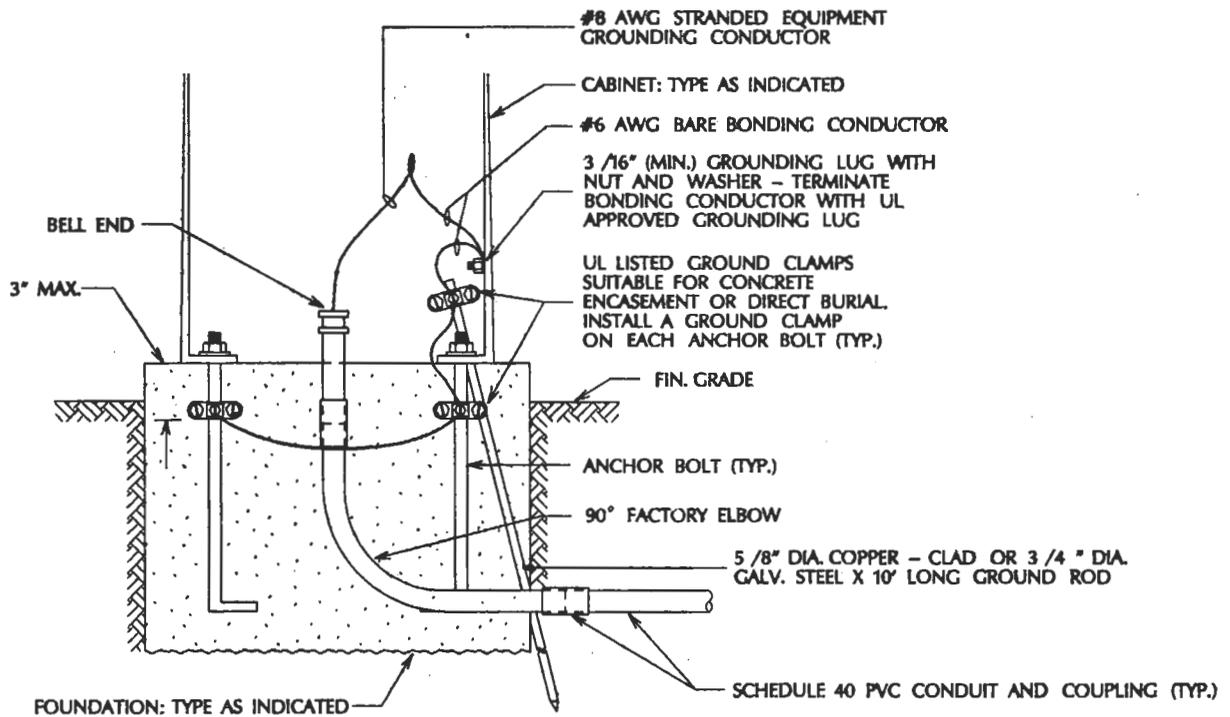
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 DATE
 3/3/92

POLE TYPE IB BONDING - METHOD B

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.
E-50



NOTES:

1. BONDING /GROUNDING DETAIL FOR USE WITH SCH. 40 PVC CONDUIT.
2. THE GROUND ROD SHALL BE INSTALLED OBLIQUELY THROUGH THE FOUNDATION IN UNDISTURBED SOIL AT AN ANGLE NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.

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DATE

3/3/92

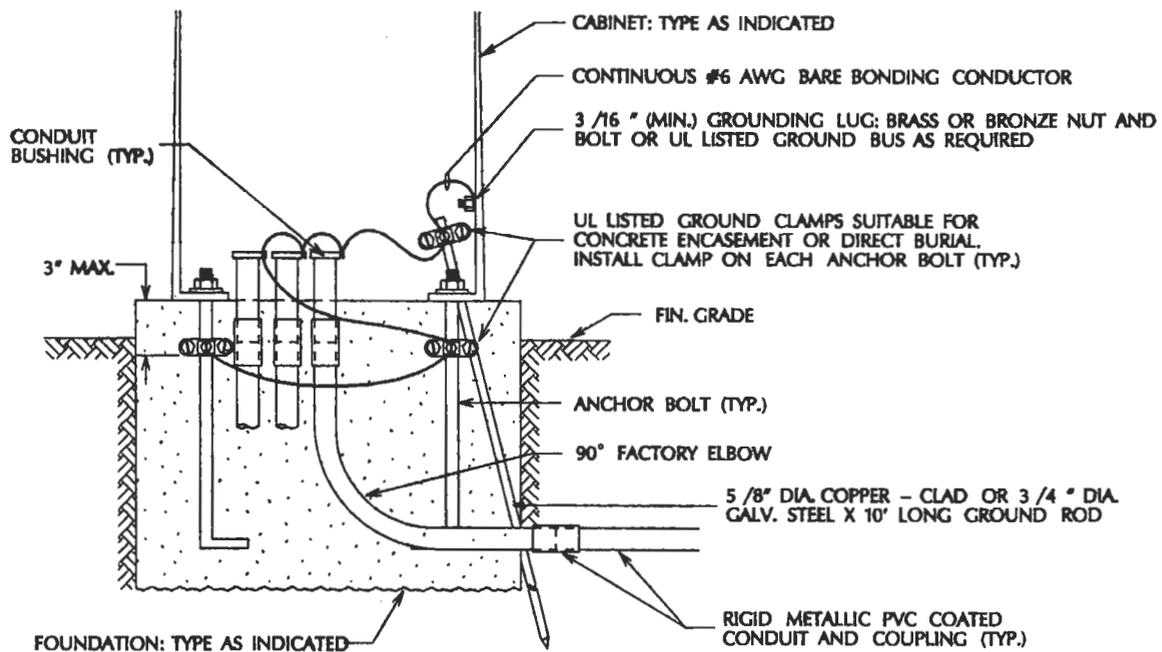
**CABINET BONDING /GROUNDING
METHOD A**

DEPARTMENT OF PUBLIC WORKS



DRAWING
NO.

E-51



NOTES:

1. BONDING /GROUNDING DETAIL FOR USE WITH GALVANIZED RIGID STEEL PVC COATED CONDUIT.
2. THE GROUND ROD SHALL BE INSTALLED OBLIQUELY THROUGH THE FOUNDATION IN UNDISTURBED SOIL AT AN ANGLE NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.

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3/3/92

**CABINET BONDING /GROUNDING
METHOD B**

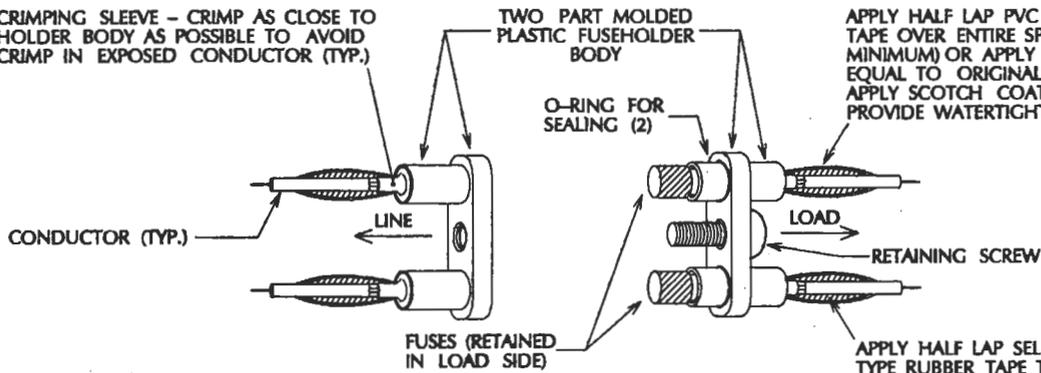
DEPARTMENT OF PUBLIC WORKS



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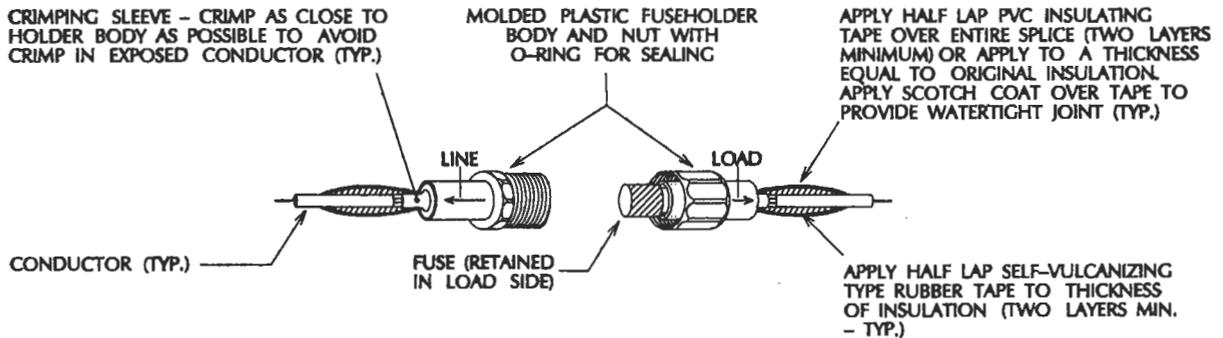
E-52

CRIMPING SLEEVE - CRIMP AS CLOSE TO HOLDER BODY AS POSSIBLE TO AVOID CRIMP IN EXPOSED CONDUCTOR (TYP.)

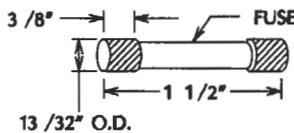


2 POLE 30A, 600V

CRIMPING SLEEVE - CRIMP AS CLOSE TO HOLDER BODY AS POSSIBLE TO AVOID CRIMP IN EXPOSED CONDUCTOR (TYP.)



1 POLE 30A, 600V



FUSE DETAIL

NOTES:

1. STRIP ENDS OF CONDUCTOR INSULATION.
2. CRIMP CONNECTOR WITH TOOL DESIGNED FOR THIS PURPOSE.
3. AMPERE RATING OF FUSEHOLDERS SHALL BE RATED 30A MIN.
4. VOLTAGE RATING OF FUSEHOLDERS SHALL BE 600V MIN.
5. PAINT ALL FINISHED TAPED CONNECTIONS WITH ELECTRICAL INSULATING COMPOUND (COATING) TO PROVIDE WATER TIGHT JOINTS.
6. FUSEHOLDERS SHALL BE TRON TYPE "HEX" (240V) OR "HEB" (120V) AS MANUFACTURED BY BUSSMAN DIV., MCGRAW-EDISON CO. OR APPROVED EQUAL. REJECTION TYPE FUSEHOLDERS ARE NOT ACCEPTABLE.
7. USE 10A, 250V A.C. RATED, GENERAL PURPOSE NON-TIME DELAY TYPE "BAF" OR "BAN" FUSES AS MANUFACTURED BY BUSSMAN DIV. OR APPROVED EQUAL FOR INDIVIDUAL STREETLIGHT FUSING APPLICATIONS.
8. FUSE EACH 240V OR 120V STREETLIGHT LUMINAIRE INDIVIDUALLY WITH 10A FUSE.
9. USE 15A, 500V AC RATED, TRON TIME-DELAY TYPE "FNQ" FUSES AS MANUFACTURED BY BUSSMAN DIV. OR APPROVED EQUAL FOR IRRIGATION CONTROLLER APPLICATIONS.
10. USE 10A OR 30A, 500V A.C. RATED, TRON TIME-DELAY TYPE "FNQ" FUSES AS MANUFACTURED BY BUSSMAN DIV. OR APPROVED EQUAL FOR SERVICE APPLICATIONS AS REQUIRED.
11. FUSES FOR UNDERGROUND FED ELECTROLIERS SHALL BE INSTALLED IN THE POLE BASE OF THE ELECTROLIER.

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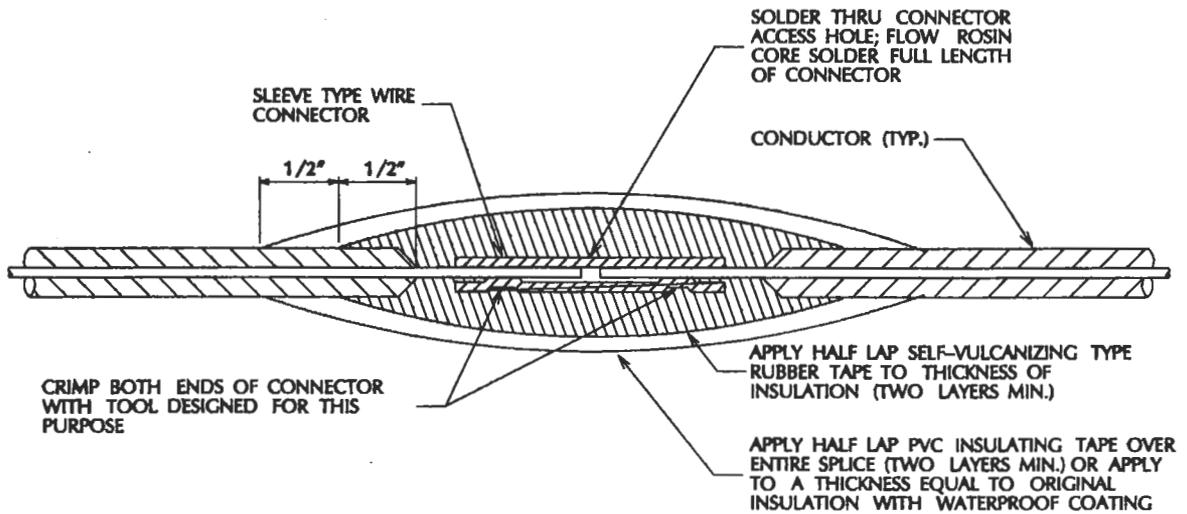
**FUSED SPLICE
CONNECTORS**

DEPARTMENT OF PUBLIC WORKS

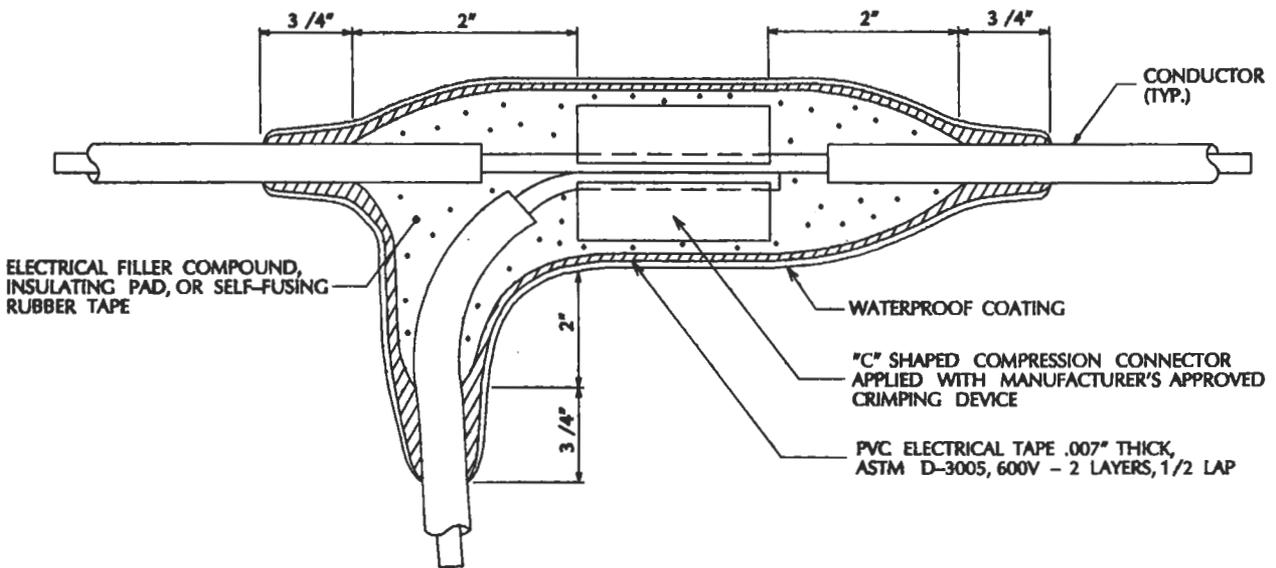


DRAWING
NO.

E-53



SINGLE CONDUCTOR TYPE
(BETWEEN TWO CONDUCTORS - END TO END CONNECTION)



TYPE "C" TAP SPLICE
(BETWEEN ONE "FREE END" AND ONE "THROUGH" CONDUCTOR)

NOTES:

1. DO NOT EXCEED CONNECTOR MANUFACTURER'S AWG COPPER WIRE SPLICING COMBINATIONS.
2. ALL DIMENSIONS ARE MINIMAL.

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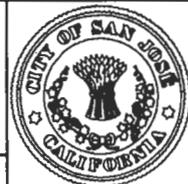
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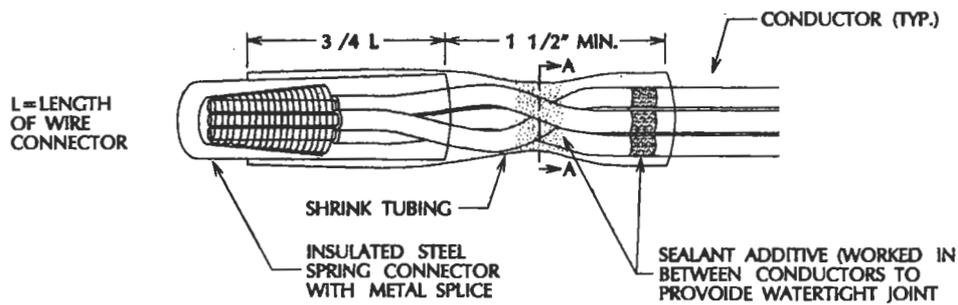
CONDUCTOR SPLICING

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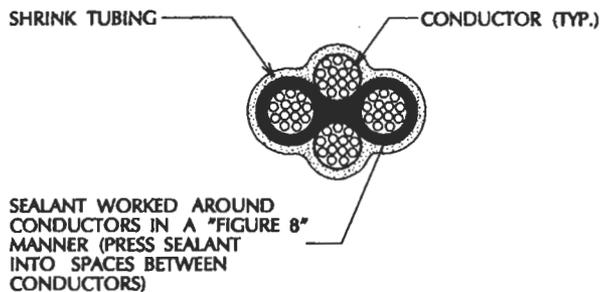


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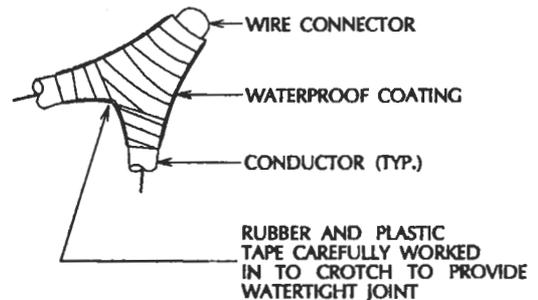
E-54



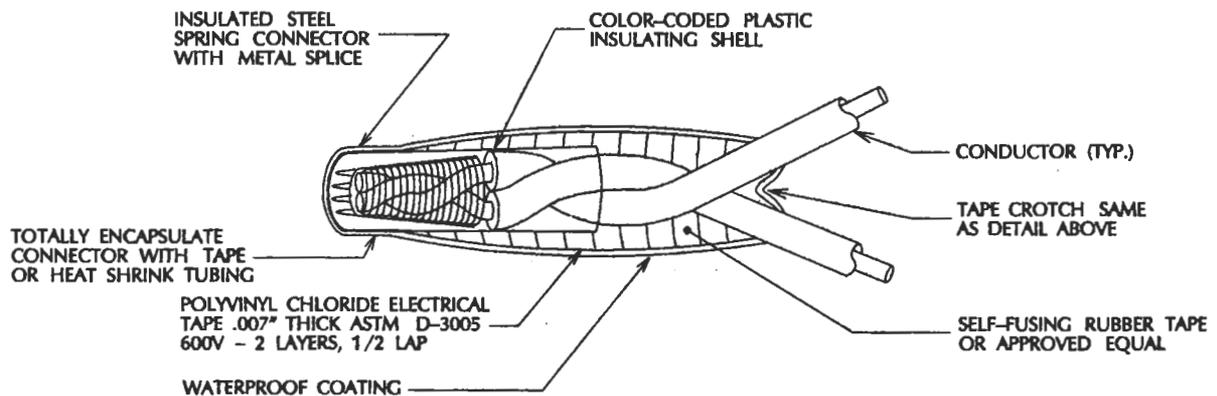
SPLICE WITH SHRINK TUBING AND INSULATED SPRING CONNECTOR



SECTION A - A



CROTCH DETAIL



SPLICE WITH INSULATED SPRING CONNECTOR

NOTES:

1. PAINT ALL TAPED SPLICES WITH ELECTRICAL WATERPROOF COATING.
2. HEAT SHRINK TUBING (RATED 600V AC) MAY BE USED IN LIEU OF PVC ELECTRICAL TAPE FOR INSULATED SPRING CONNECTORS.
3. DO NOT EXCEED SPRING CONNECTOR MANUFACTURER'S AWG COPPER WIRE SPlicing COMBINATION RECOMMENDATIONS.

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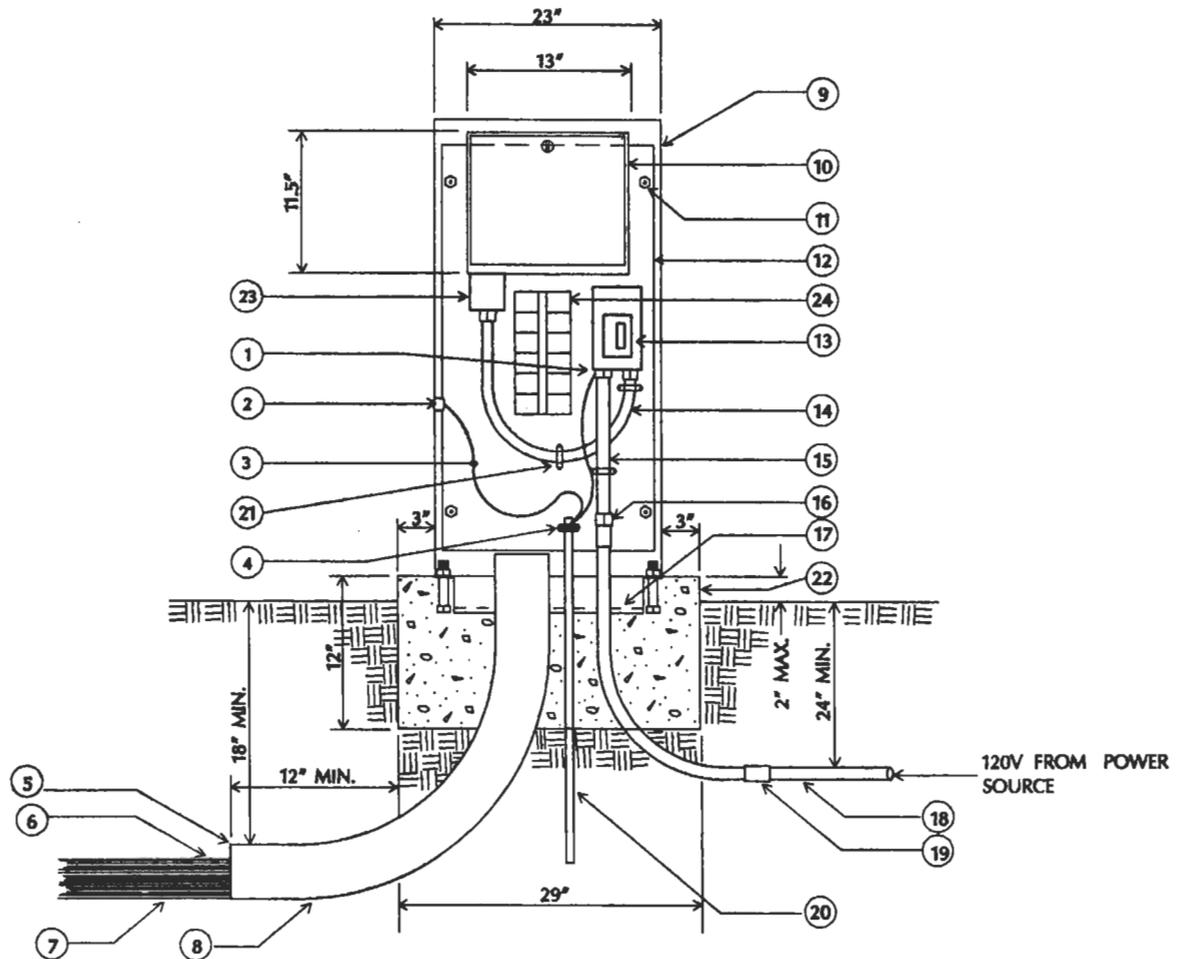
**CONDUCTOR SPLICING
SPRING CONNECTORS**

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DRAWING
NO.

E-55



- ① UL LISTED GROUNDING FITTING
- ② GROUND LUG WELDED TO ENCLOSURE
- ③ #8 BARE COPPER GROUND
- ④ GROUND CLAMP
- ⑤ SEAL ALL ENDS WITH DUCT SEAL (TYP.)
- ⑥ TIE CONDUCTORS AT 20' INTERVALS (TYP.)
- ⑦ DIRECT BURIAL LOW VOLTAGE CONTROLLER CONDUCTORS
- ⑧ 4" SCH. 40 PVC CONDUIT (INSTALL TO ALIGN WITH OPENING ON BOTTOM OF CONTROLLER)
- ⑨ CONTROLLER ENCLOSURE (SEE LANDSCAPE PLANS FOR MANUFACTURER & MODEL NO.)
- ⑩ IRRIGATION CONTROLLER (SEE LANDSCAPE PLANS FOR MANUFACTURER & MODEL NO.)
- ⑪ MOUNTING NUT AND BOLT (4 TYPICAL)
- ⑫ MOUNTING BACKBOARD
- ⑬ 120V CIRCUIT BREAKER DISCONNECT IN NEMA 1 ENCLOSURE (I-T-E CAT # W0204ML1060 WITH 15A, IP, 10,000 A.I.C. RATED CIRCUIT BREAKER AND GROUNDING KIT OR APPROVED EQUAL)
- ⑭ 1/2" SEALTITE FLEXIBLE CONDUIT WITH 3 #12 AWG. THW COPPER CONDUCTORS
- ⑮ 1" SEALTITE FLEXIBLE CONDUIT WITH 3 #8 AWG. THW COPPER CONDUCTORS
- ⑯ 1" FLEX INSULATED THROAT CONDUIT CONNECTOR WITH FEMALE ADAPTOR
- ⑰ ZINC PLATED STEEL BASE WITH STAINLESS MOUNTING STUDS
- ⑱ 1" SCH. 40 PVC CONDUIT WITH 3 #8 AWG, THW COPPER CONDUCTORS
- ⑲ PVC COUPLING (TYP.)
- ⑳ 5/8" DIA. COPPER-CLAD OR 3/4" DIA. GALV. STEEL X 10' LONG GROUND ROD
- ㉑ CONDUIT FASTENER SECURED TO BACKBOARD (TYP.)
- ㉒ PCC FOUNDATION
- ㉓ APPROVED JUNCTION BOX - SPLICE CONTROLLER LINE VOLTAGE WIRING TO CIRCUIT AS REQUIRED
- ㉔ 36 STATION TERMINAL STRIPS

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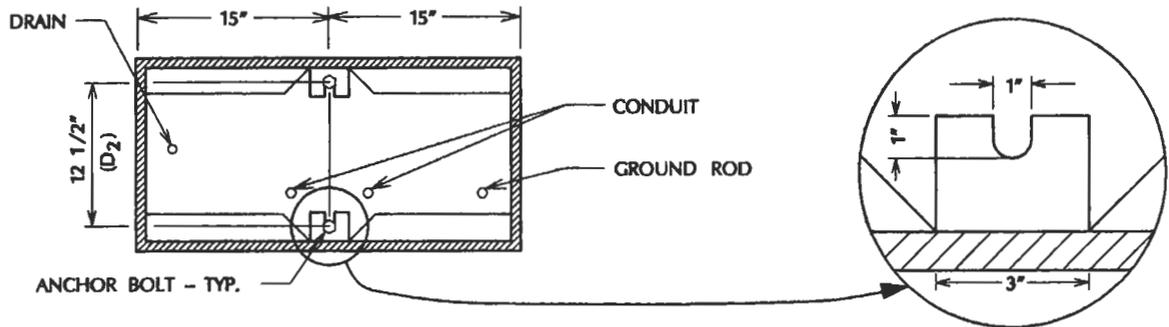
**IRRIGATION CONTROLLER
ENCLOSURE
FOR MEDIAN ISLAND**

DEPARTMENT OF PUBLIC WORKS

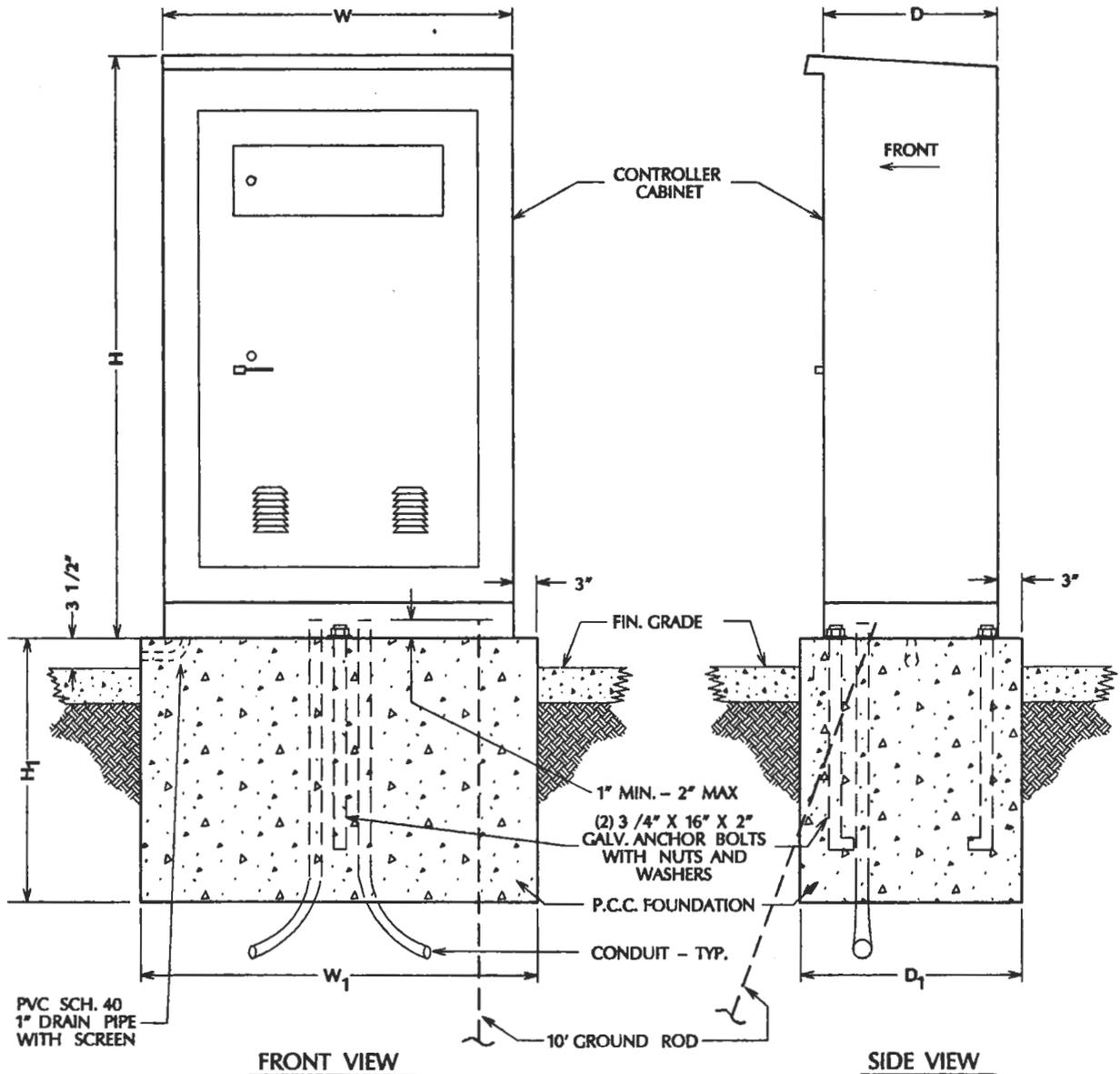


DRAWING
NO.

E-56



TOP VIEW



FRONT VIEW

SIDE VIEW

- NOTES:
 1. SEE DRAWINGS E-51 AND E-52 FOR GROUNDING /BONDING REQUIREMENTS AND DRAWING E-59 FOR DIMENSIONS.
 2. THE GROUND ROD SHALL BE INSTALLED OBLIQUELY THROUGH THE FOUNDATION FOR MAXIMUM CONTACT IN UNDISTURBED SOIL.

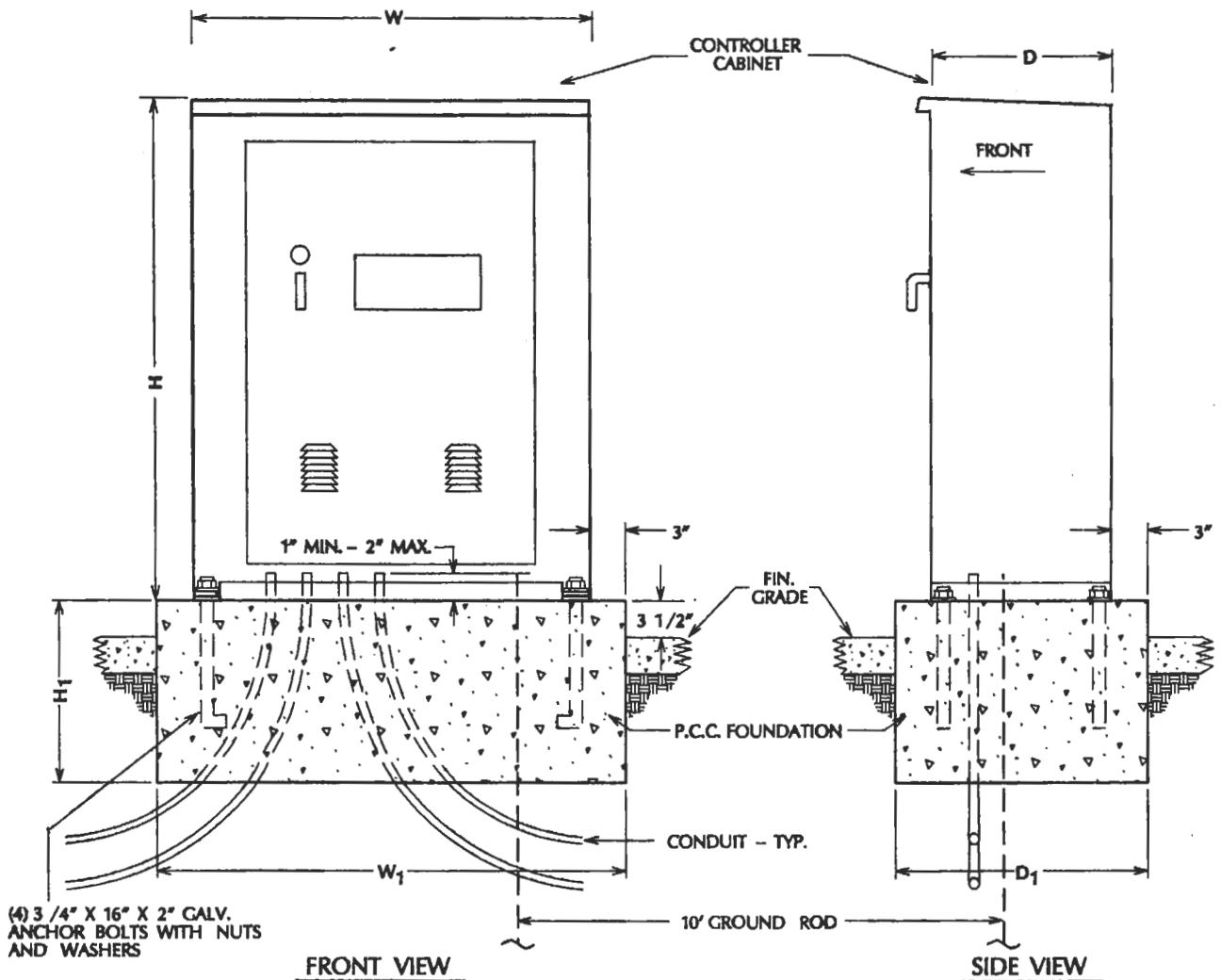
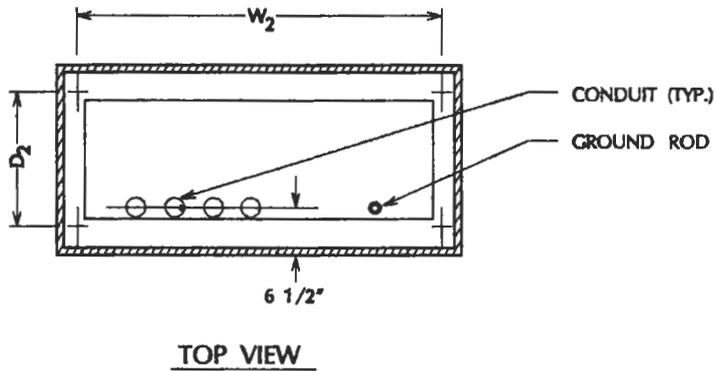
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**CONTROLLER CABINET /FOUNDATION
 TYPE M**

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DRAWING NO.
E-57



NOTE:
SEE DRAWINGS E-51 AND E-52 FOR GROUNDING /BONDING REQUIREMENTS AND DRAWING E-59 FOR DIMENSIONS.

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**CONTROLLER CABINET /FOUNDATION
TYPE P**

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-58

CONTROLLER CABINET /FOUNDATION DIMENSION TABLE

TYPE	CABINET			FOUNDATION			BOLT MOUNTING	
	H	W	D	H ₁	W ₁	D ₁	D ₂	W ₂
M	57 1/2"	30"	17"	24"	36"	23"	12 1/2"	-
P	55 9/16"	44"	26"	24"	50"	32"	18 1/2"	40 1/2"

NOTES – CONTROLLER CABINET /FOUNDATION

1. ALL CABINET DIMENSIONS ARE NOMINAL.
2. EXACT LOCATION OF CONTROLLER CABINET SHALL BE DETERMINED BY CSJ DEPT. OF PUBLIC WORKS DURING CONSTRUCTION.
3. ALL ANCHOR BOLTS SHALL BE BONDED IN ACCORDANCE WITH DRAWINGS E-51 AND E-52.
4. IN UNPAVED AREAS, A RAISED P.C.C. PAD SHALL BE PLACED IN FRONT OF EACH CONTROLLER CABINET. PAD SHALL BE A MINIMUM OF 3'-0" X 0'-4" THICK X WIDTH OF FOUNDATION FOR TYPE 'M', 'M' (MODIFIED) AND 'P' CABINETS.
5. IN UNPAVED AREAS, THE TOP OF FOUNDATION FOR TYPE 'P' CABINETS SHALL BE 6" ABOVE SURROUNDING GRADE. TOP OF FOUNDATION FOR TYPE 'M' CABINET SHALL BE 18" ABOVE SURROUNDING GRADE.
6. IN SIDEWALKS AND OTHER PAVED AREAS, TOP OF FOUNDATION FOR TYPE 'P' AND 'M' (MODIFIED) CABINETS SHALL BE 3 1/2" ABOVE SURROUNDING GRADE.
7. A 1" DRAIN SHALL BE PROVIDED THROUGH THE FOUNDATION OF TYPE 'M'/'M' (MODIFIED) CABINETS. DRAIN PIPE SHALL BE SCREENED.
8. SEE TABLE FOR CABINET AND FOUNDATION DIMENSIONS; "D" = DEPTH, "H" = HEIGHT, AND "W" = WIDTH. SEE TABLE FOR ANCHOR BOLT SPACING; "D₂" = DEPTH AND "W₂" = WIDTH.
9. AN APPROVED MASTIC OR CAULKING COMPOUND SHALL BE PLACED ON THE FOUNDATION PRIOR TO PLACING THE CABINET TO SEAL ALL OPENINGS BETWEEN BOTTOM OF CABINET AND FOUNDATION.

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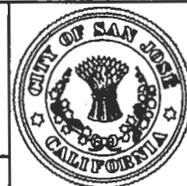
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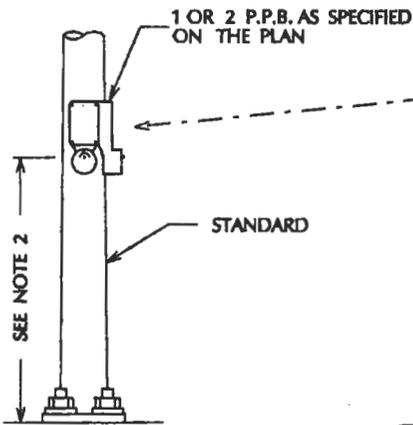
CONTROLLER CABINET /FOUNDATION

DEPARTMENT OF PUBLIC WORKS



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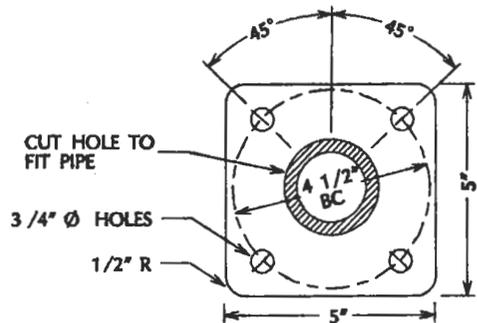
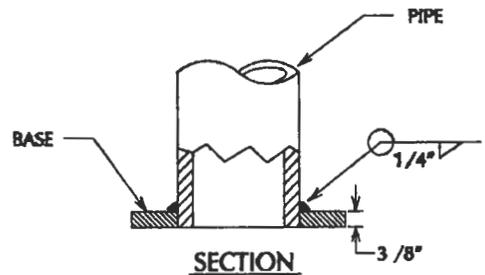
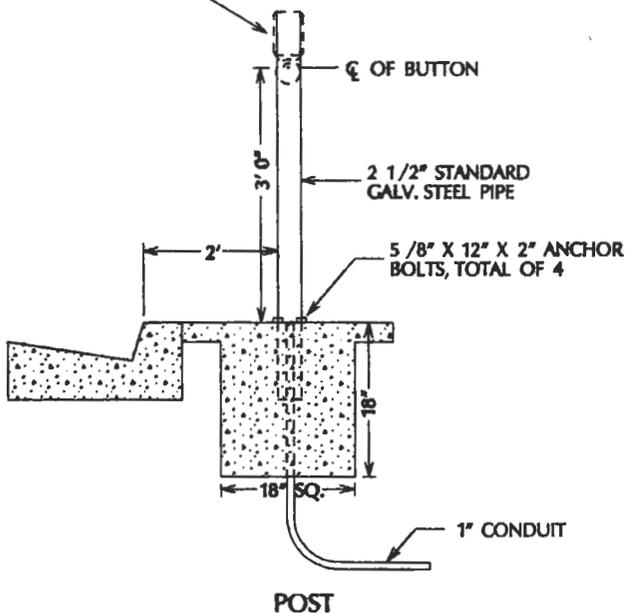
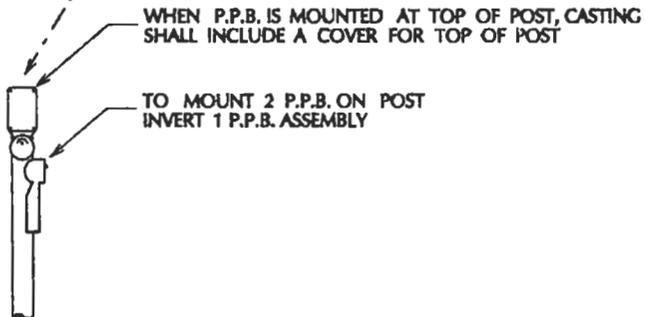
E-59



SEE E-61 FOR PEDESTRIAN PUSH BUTTON SIGN DETAILS

TYPICAL MOUNTING ON STANDARD

MOUNT P.P.B. ON CROSS WALK SIDE OF POST OR STANDARD, OR AS DIRECTED BY THE ENGINEER



NOTES:

1. CONDUIT SHALL PROTRUDE 2" MAX. ABOVE FINISHED SURFACE FOUNDATION.
2. WHERE INSTALLED IN SIIDEWALK AREAS, PEDESTRIAN PUSH BUTTONS SHALL BE MOUNTED 36 INCHES ABOVE THE BASE OF THE POLE. WHERE INSTALLED ON A RAISED (6 INCH) TRAFFIC ISLAND WITH WHEELCHAIR OPENINGS, PEDESTRIAN PUSH BUTTONS SHALL BE MOUNTED 30 INCHES ABOVE THE BASE OF THE POLE.
3. BACK OF PUSHBUTTON CASTING TO BE SHAPED TO FIT CURVATURE OF POST OR STANDARDS.

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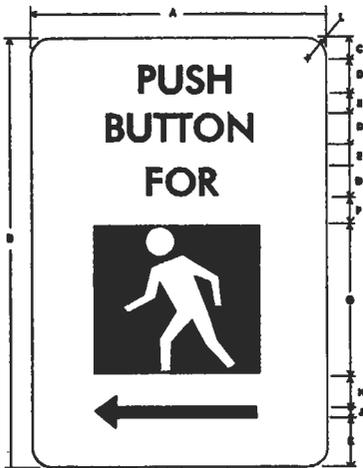
PEDESTRIAN PUSHBUTTON MOUNTING

DEPARTMENT OF PUBLIC WORKS



DRAWING NO.

E-60



ALTERNATE SYMBOL AND ARROW DIRECTIONS: LEFT, RIGHT OR BOTH

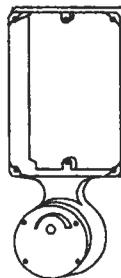


SIGN	DIMENSIONS (INCHES)										
	A	B	C	D	E	F	G	H	J	K	L
MIN.	5	7-1/2	9/16	3/4	3/8	7/16	2-1/8	3/8	1/4	3/4	3/4

COLORS

LEGEND & ARROW - BLACK
BACKGROUND & SYMBOLS - WHITE

PEDESTRIAN PUSH BUTTON SIGN



TYPE B

PEDESTRIAN PUSH BUTTON

1. SHAPE BACK OF CASTING TO FIT CURVATURE OF POST.
2. PROVIDE COVER FITTING FOR TOP OF POST, WHEN PPB IS MOUNTED ON PEDESTRIAN PUSH BUTTON POST.
3. INSTALL PUSHBUTTON ON CROSSWALK SIDE OF STANDARD.

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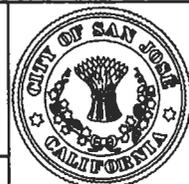
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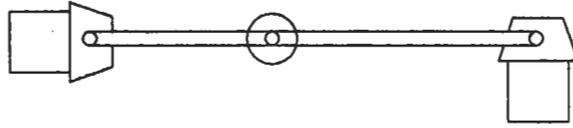
PEDESTRIAN PUSHBUTTON SIGNS

DEPARTMENT OF PUBLIC WORKS

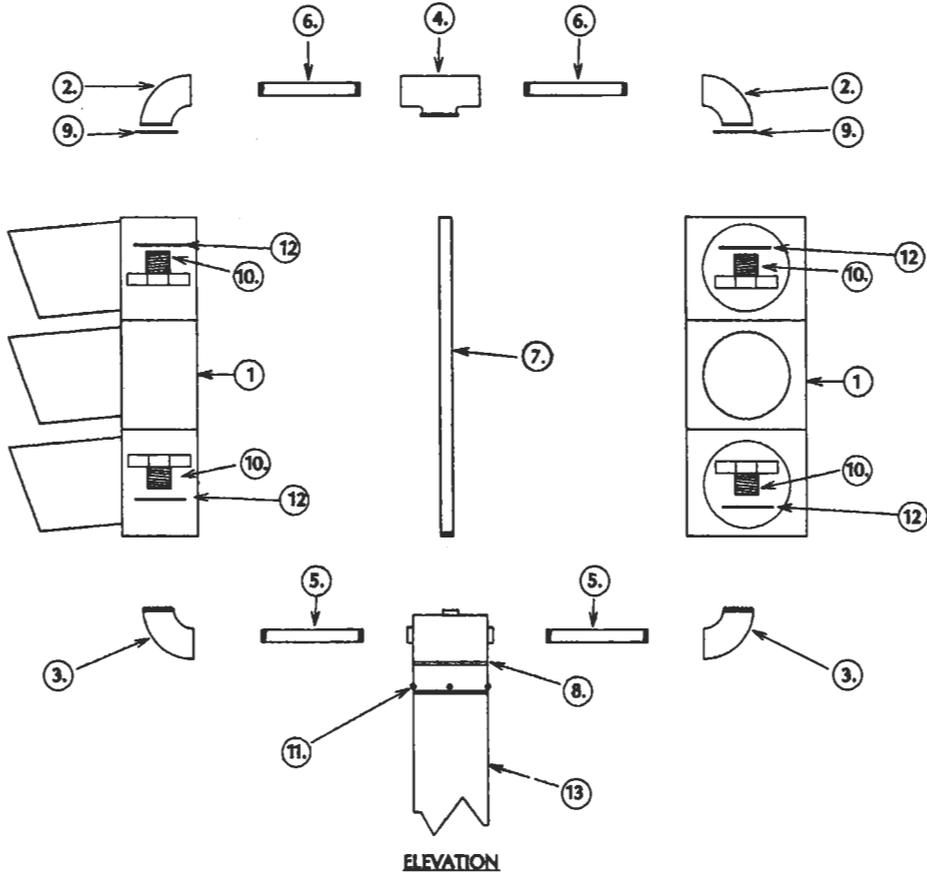


DRAWING NO.

E-61



PLAN VIEW



ELEVATION

MOUNTING HARDWARE		
NO.	DESCRIPTION	QTY.
1.	TRAFFIC SIGNAL HEAD ASSEMBLY WITH THREE 8" SECTIONS	2
2.	1 1/2" ELBOW WITH FLANGE	2
3.	1 1/2" ELBOW, SHURLOCK	2
4.	1 1/2" TEE, REAMED WITH SET SCREW	1
5.	1 1/2" x 11" NIPPLE	2
6.	1 1/2" x 12" NIPPLE	2
7.	1 1/2" x 32" CENTERPIPE	1
8.	ADAPTOR, BRONZE	1
9.	WASHER, NEOPRENE	2
10.	1 1/2" LOCKNIPPLE	4
11.	3/8" x 5/8" ALLEN HEAD SET SCREW	6
12.	WASHER, GALVANIZED	4
13.	POLE TOP	

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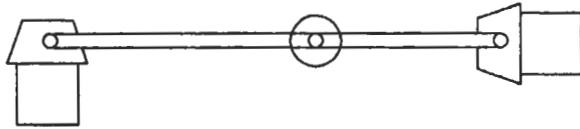
VEHICULAR SIGNAL
TWO 8" HEAD ASSEMBLIES
TYPE TV2

DEPARTMENT OF PUBLIC WORKS

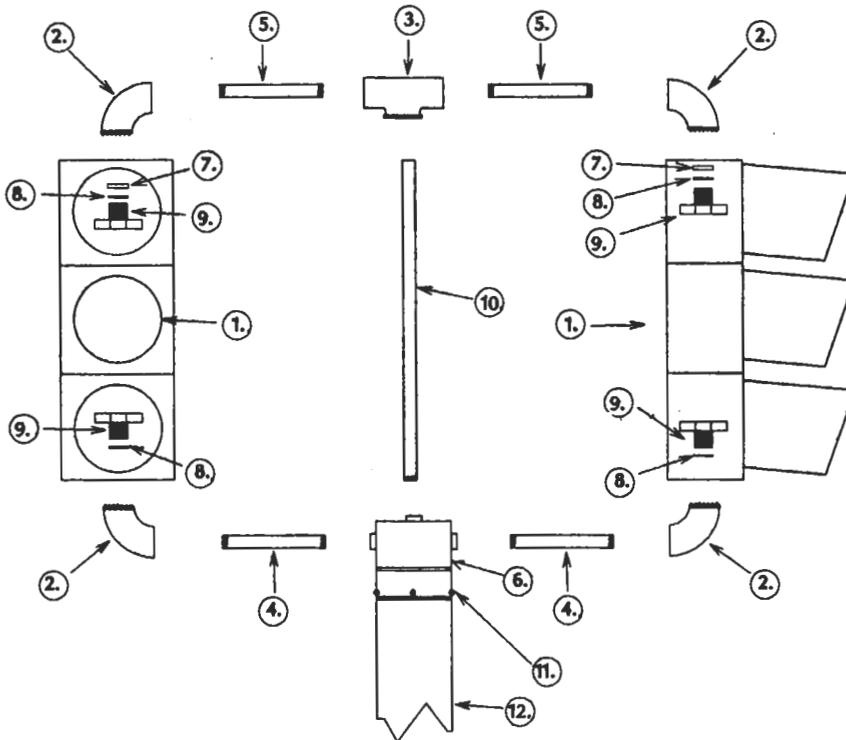


DRAWING
NO.

E-62



PLAN VIEW



ELEVATION

MOUNTING HARDWARE		
NO.	DESCRIPTION	QTY.
1.	TRAFFIC SIGNAL HEAD ASSEMBLY WITH THREE 12" SECTIONS	2.
2.	1 1/2" ELBOW, SHURLOCK	4.
3.	1 1/2" TEE, REAMED WITH SET SCREW	1.
4.	1 1/2" x 11" NIPPLE	2.
5.	1 1/2" x 12" NIPPLE	2.
6.	ADAPTOR, BRONZE	1.
7.	WASHER, NEOPRENE	2.
8.	WASHER, GALVANIZED	4.
9.	1 1/2" LOCKNIPPLE	4.
10.	1 1/2" x 46" CENTERPIPE	1.
11.	3/8" x 5/8" ALLEN HEAD SET SCREW	6.
12.	POLE TOP	

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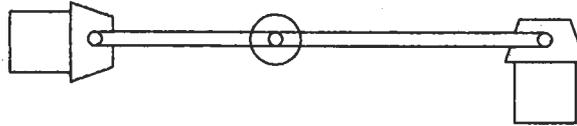
**VEHICULAR SIGNAL
TWO 12" HEAD ASSEMBLIES
TYPE TV2**

DEPARTMENT OF PUBLIC WORKS

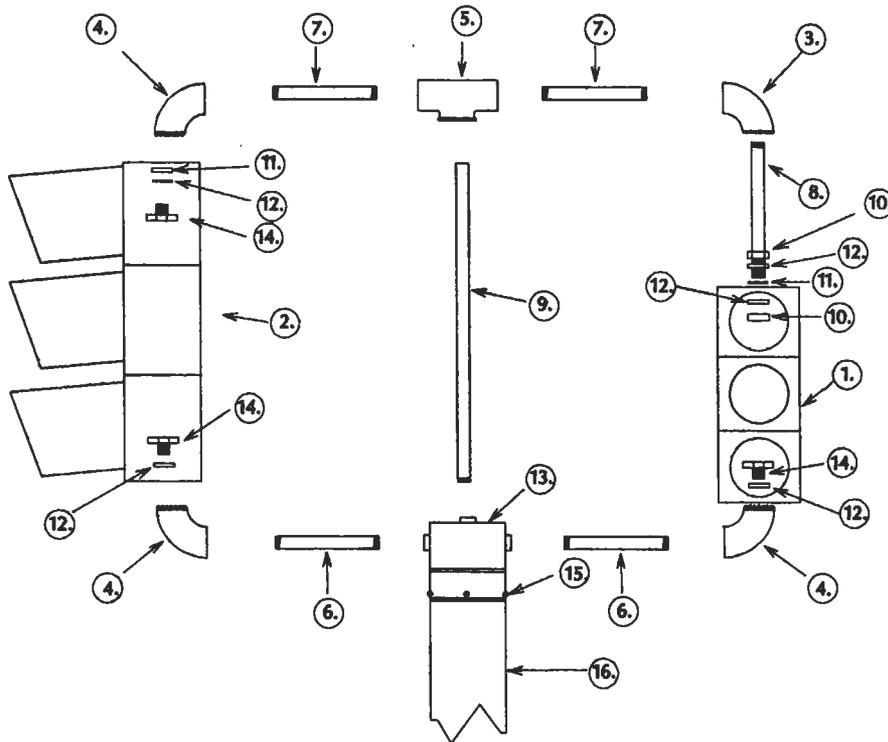


DRAWING NO.

E-63



PLAN VIEW



ELEVATION

MOUNTING HARDWARE		
NO.	DESCRIPTION	QTY.
1.	TRAFFIC SIGNAL HEAD ASSEMBLY WITH THREE 8" SECTIONS	1.
2.	TRAFFIC SIGNAL HEAD ASSEMBLY WITH THREE 12" SECTIONS	1.
3.	1 1/2" ELBOW, PLAIN	1.
4.	1 1/2" ELBOW, SHURLOCK	3.
5.	1 1/2" TEE, REAMED WITH SET SCREW	1.
6.	1 1/2" x 11" NIPPLE	2.
7.	1 1/2" x 12" NIPPLE	2.
8.	1 1/2" x 16 3/4" NIPPLE WITH 3" T.O. E.	1.
9.	1 1/2" x 46" CENTERPIPE	1.
10.	1 1/2" LOCKNUT	2.
11.	WASHER, NEOPRENE	2.
12.	WASHER, GALVANIZED	5.
13.	ADAPTOR BRONZE	1.
14.	1 1/2" LOCKNIPPLE	3.
15.	3/8" x 5/8" ALLEN HEAD SET SCREW	6.
16.	POLE TOP	

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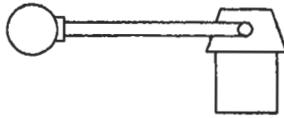
**VEHICULAR SIGNAL
8" / 12" COMBINATION HEAD ASSEMBLY
TYPE TV-2**

DEPARTMENT OF PUBLIC WORKS

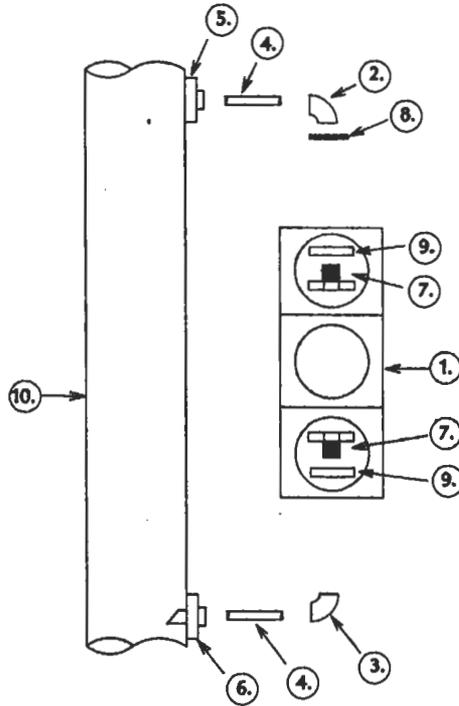


DRAWING NO.

E-64



PLAN VIEW



ELEVATION

MOUNTING HARDWARE		
NO.	DESCRIPTION	QTY.
1.	TRAFFIC SIGNAL HEAD ASSEMBLY WITH THREE 8" SECTIONS	1.
2.	1 1/2" ELBOW WITH FLANGE	1.
3.	1 1/2" ELBOW, SHURLOCK	1.
4.	1 1/2" x 8" NIPPLE	2.
5.	POLE PLATE, PLAIN BRONZE	1.
6.	POLE PLATE WITH CABLE GUIDE, BRONZE	1.
7.	1 1/2" LOCKNIPPLE	2.
8.	WASHER, NEOPRENE	1.
9.	WASHER, GALVANIZED	2.
10.	STANDARD	

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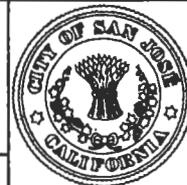
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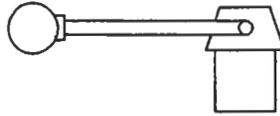
**VEHICULAR SIGNAL
ONE 8" HEAD ASSEMBLY
TYPE SV-1**

DEPARTMENT OF PUBLIC WORKS

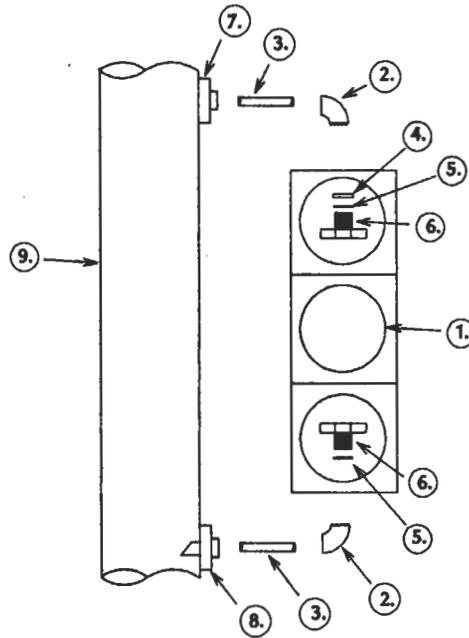


DRAWING NO.

E-65



PLAN VIEW



ELEVATION

MOUNTING HARDWARE		
NO.	DESCRIPTION	QTY.
1.	TRAFFIC SIGNAL HEAD ASSEMBLY WITH THREE 12" SECTIONS	1.
2.	1 1/2" ELBOW, SHURLOCK	2.
3.	1 1/2" x 10" NIPPLE	2.
4.	WASHER, NEOPRENE	1.
5.	WASHER, GALVANIZED	2.
6.	1 1/2" LOCKNIPPLE	2.
7.	POLE PLATE, PLAIN, BRONZE	1.
8.	POLE PLATE WITH CABLE GUIDE, BRONZE	1.
9.	STANDARD	

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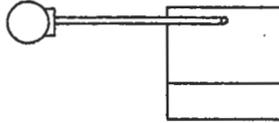
**VEHICULAR SIGNAL
ONE 12" HEAD ASSEMBLY
TYPE SV-1**

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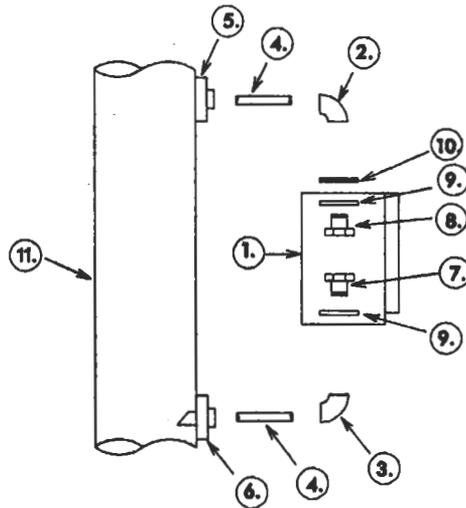


DRAWING NO.

E-66



PLAN VIEW



ELEVATION

MOUNTING HARDWARE		
NO.	DESCRIPTION	QTY.
1.	PEDESTRIAN SIGNAL HEAD ASSEMBLY	1.
2.	1 1/2" ELBOW WITH FLANGE	1.
3.	1 1/2" ELBOW, SHURLOCK	1.
4.	1 1/2" x 10" NIPPLE	2.
5.	POLE PLATE, PLAIN, BRONZE	1.
6.	POLE PLATE WITH CABLE GUIDE, BRONZE	1.
7.	LOCKNIPPLE, SHORT	1.
8.	1 1/2" LOCKNIPPLE	1.
9.	WASHER, GALVANIZED	2.
10.	WASHER, NEOPRENE	1.
11.	STANDARD	

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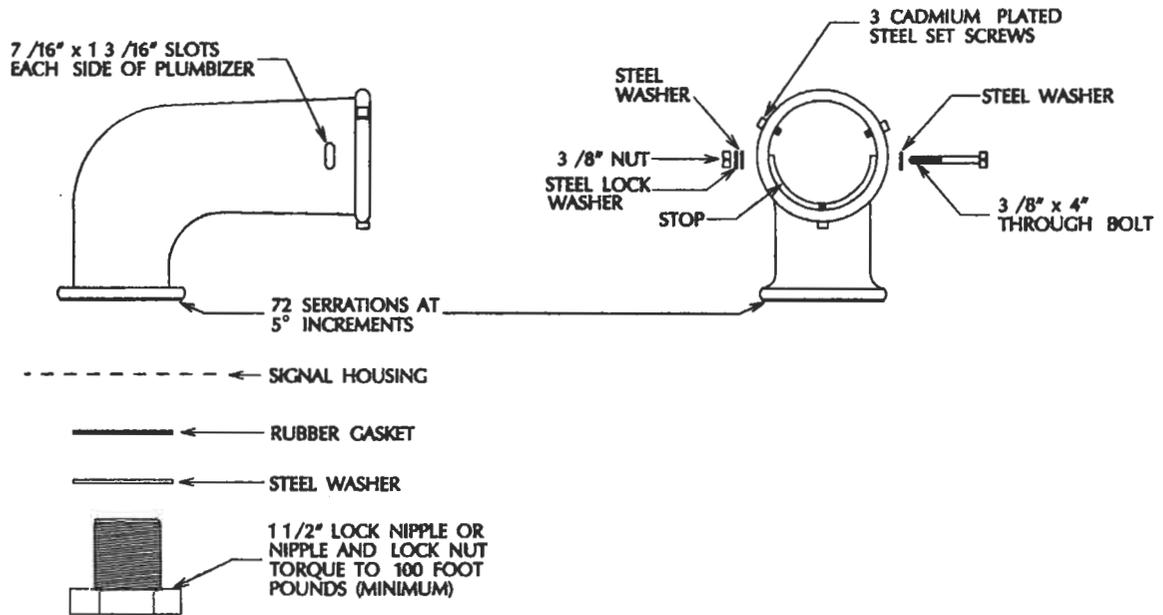
PEDESTRIAN SIGNAL HEAD
TYPE SP-1

DEPARTMENT OF PUBLIC WORKS

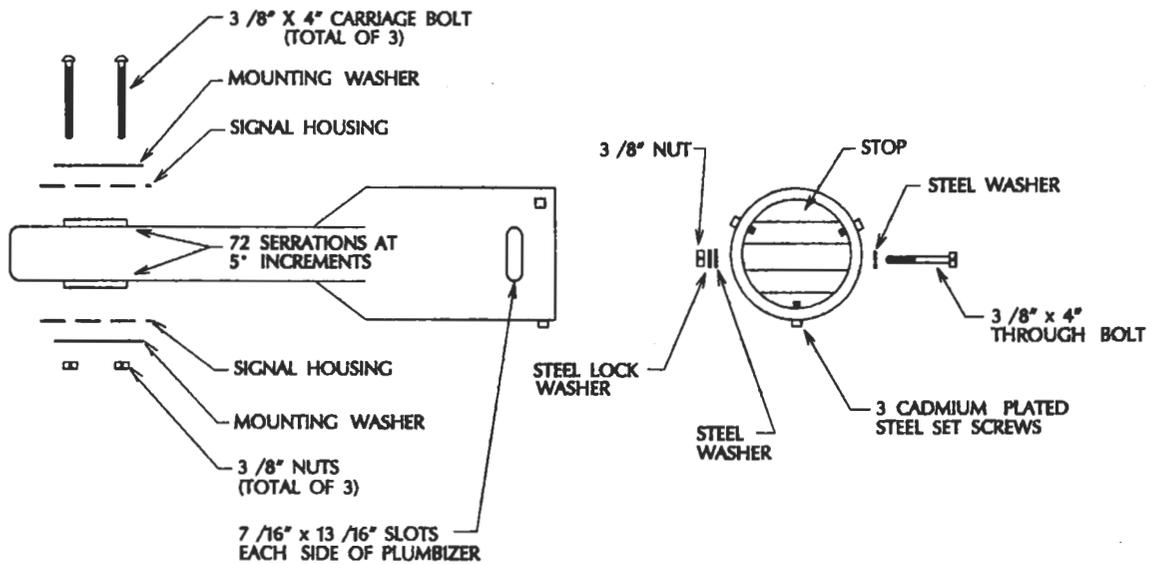


DRAWING NO.

E-67



TYPE 'MAT' MOUNTING - MAST ARM PLUMBIZER



TYPE 'MAS' MOUNTING - MAST ARM PLUMBIZER

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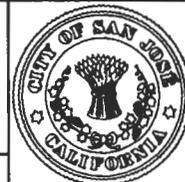
Awes

DATE

3/3/92

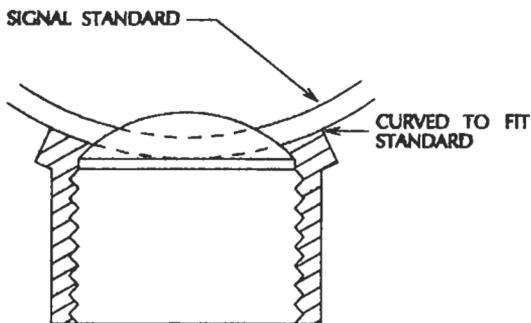
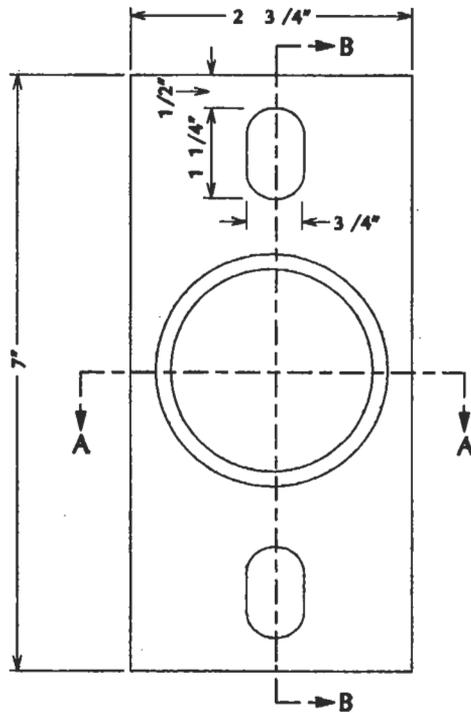
TYPE 'MAT' AND "MAS" MOUNTING
MAST ARM PLUMBIZERS

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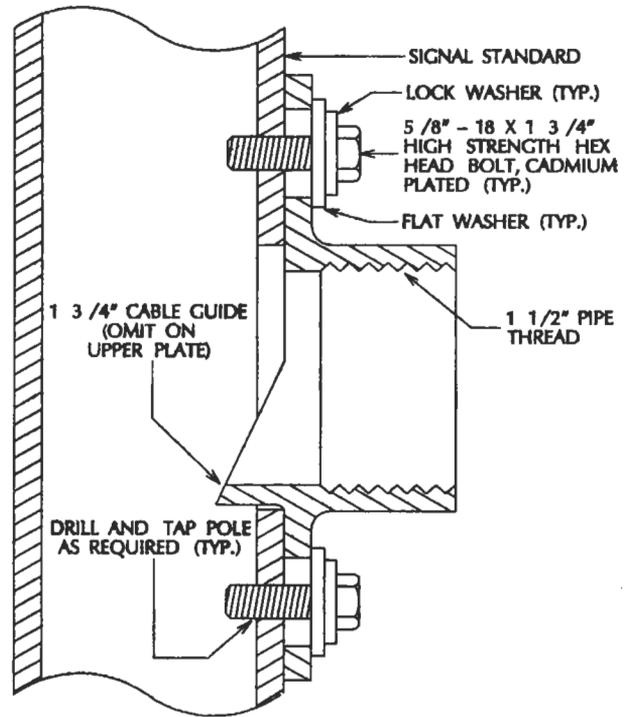


DRAWING NO.

E-68



SECTION A - A



SECTION B - B

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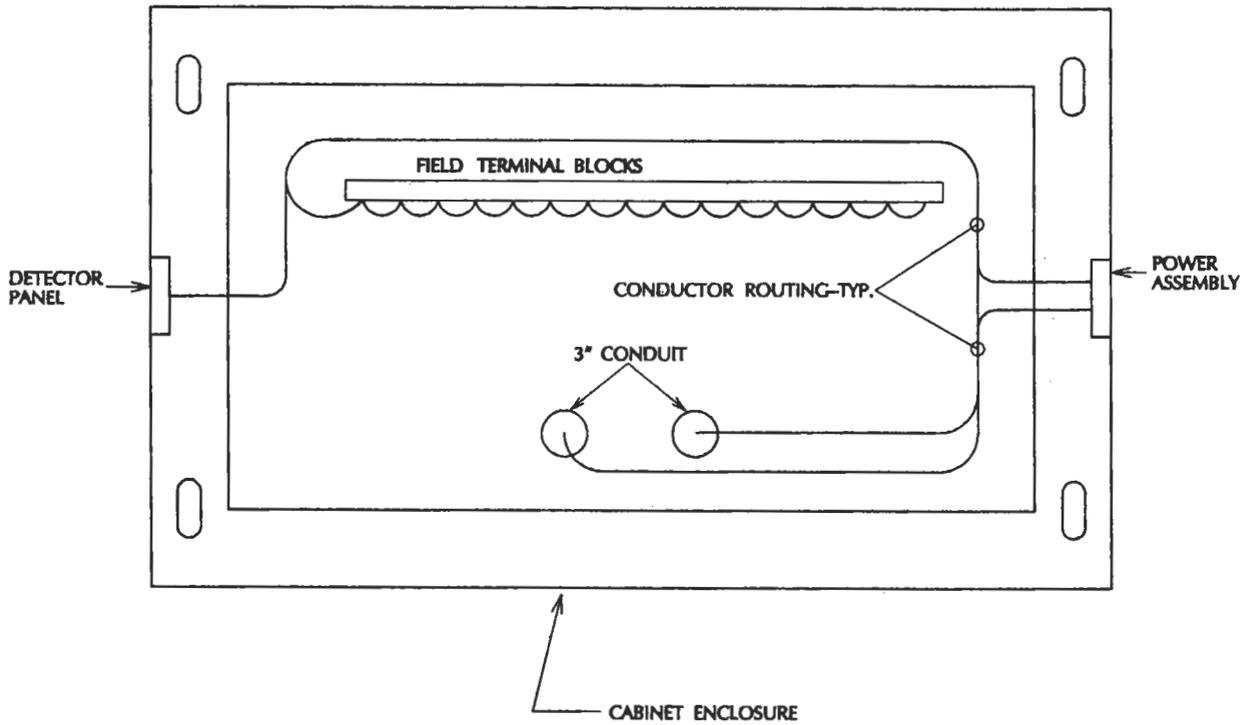
**POLE PLATE FOR SIDE
SIGNAL HEAD MOUNTINGS**

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DRAWING
NO.

E-69



PLAN VIEW

- NOTES:
 1. ROUTE CABLES AROUND INSIDE PERIMETER OF CABINET.
 2. TERMINATE WIRES ALLOWING LOAD BAY BACK PLANE ASSEMBLY TO BE LOWERED WITHOUT DISCONNECTING ANY WIRES.

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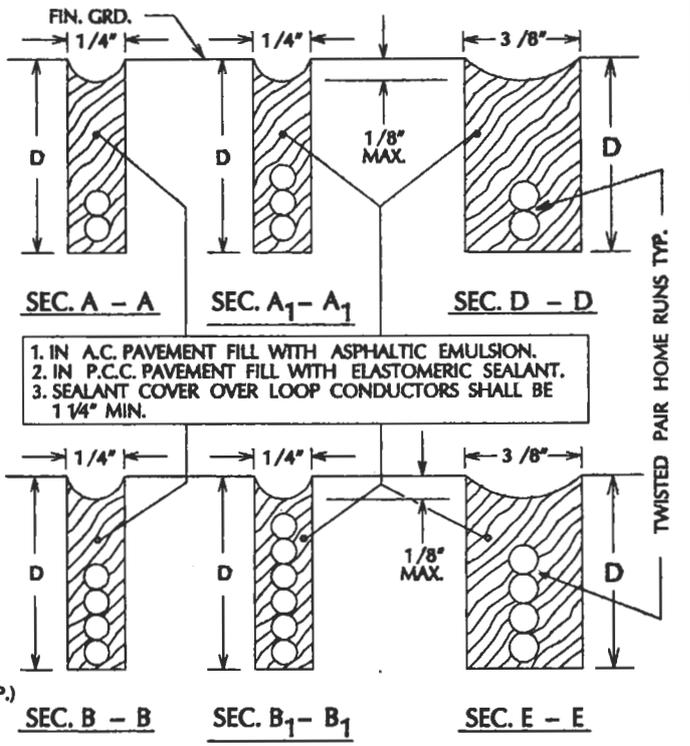
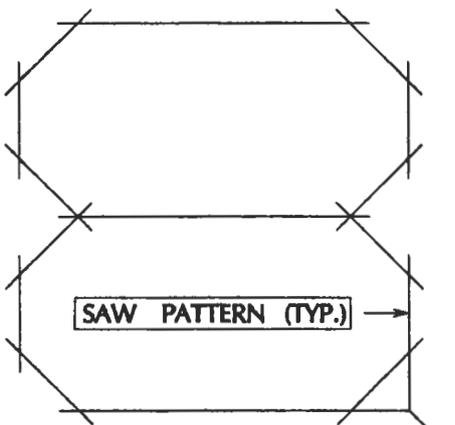
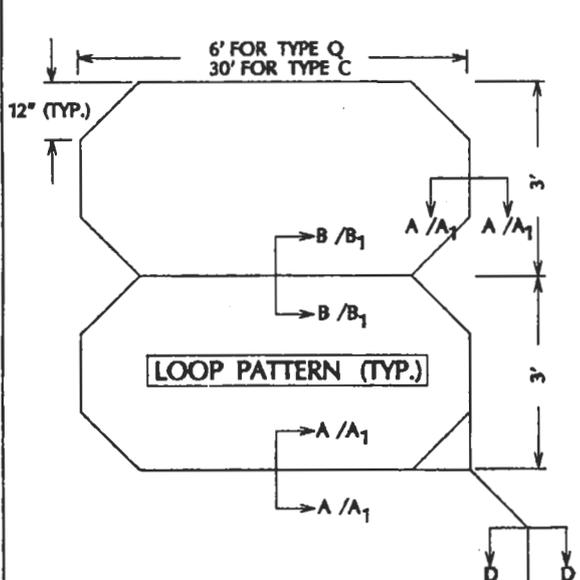
**TRAFFIC SIGNAL
 CONTROLLER CABINET
 CONDUCTOR ROUTING**

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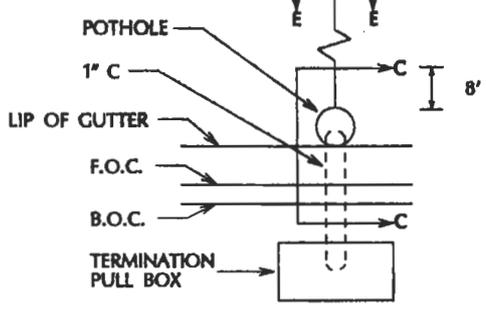
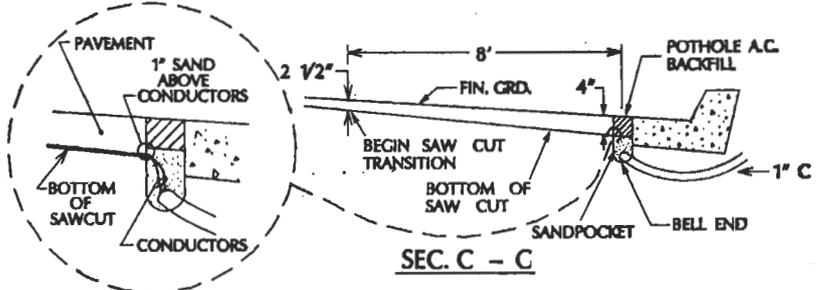


DRAWING NO.

E-70

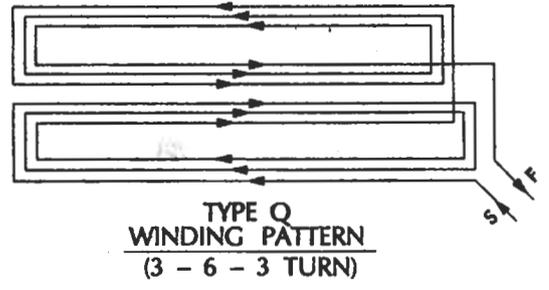
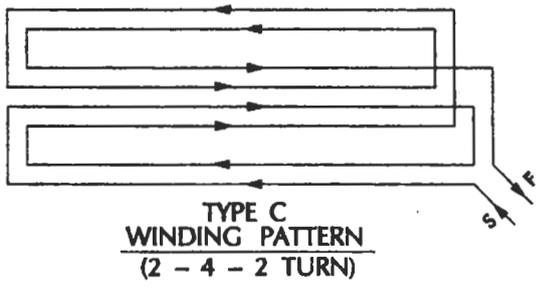


1. IN A.C. PAVEMENT FILL WITH ASPHALTIC EMULSION.
2. IN P.C.C. PAVEMENT FILL WITH ELASTOMERIC SEALANT.
3. SEALANT COVER OVER LOOP CONDUCTORS SHALL BE 1/4" MIN.



DETECTOR TYPE	SEC.	NO. WIRES	"D" A.C.	"D" P.C.C.
C	A - A	2	2 1/2" MIN.	2 1/2" MIN.
	B - B	4	2 1/2" MIN.	2 1/2" MIN.
C OR Q	C - C	4	2 1/2" - 4" MIN.	2 1/2" MIN.
	D - D	2	2 1/2" MIN.	2 1/2" MIN.
	E - E	4	2 1/2" MIN.	2 1/2" MIN.
Q	A1 - A1	3	2 1/2" MIN.	2 1/2" MIN.
	B1 - B1	6	2 1/2" MIN.	2 1/2" MIN.

CROSS SECTION TABLE



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INDUCTIVE LOOP DETECTORS TYPE C AND Q

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DRAWING NO.
E-71

1. Inductive loop detector installations shall conform to Section 86-5 DETECTORS of the specifications, these notes and the Standard Plan Details.
2. Loop conductors shall be installed without splices and shall terminate in the pull box indicated on the plans. Each loop shall be provided with its own detector lead-in cable. Detector lead-in cables shall be continuous, without splices between the loop termination pull box and the detector panel terminal block in the controller cabinet.
3. All loop conductors and lead-in cables shall be labeled in accordance with CSJ specifications Section 86-2.09, "Wiring".
4. The end of the lead-in cable shall be taped and waterproofed prior to installing in conduit to prevent moisture from entering the cable. Where loop conductors are not immediately to be spliced to a lead-in cable, the ends of both the loop conductors and lead-in cable shall be taped and waterproofed with an electrical insulating coating.
5. All adjacent loops shall be wound in the same direction. No more than 4 loop conductors (2 twisted pairs) shall be installed in one home-run slot. Loop conductors for more than one signal phase shall not be combined in a common home-run slot.
6. Loops shall be centered in lanes and set back 2 feet from stop bar unless specified otherwise. The distance between the side of the loop and the home-run saw cut from the adjacent loops shall be 2 feet minimum. The distance between home-run saw cuts shall be 6 inches minimum. Loop conductors shall be installed a minimum of 3 feet from any metal obstacles in the street such as metal manhole covers.
7. Sawcut slots, of the width and to the depths shown on the Standard Plan Details, shall be cut into the pavement of the locations laid out by the Engineer.
8. Before installing loop conductors in the sawed slots, the slots shall be thoroughly washed out with water and then blown out with compressed air and allowed to dry thoroughly.
9. The loop conductor shall be installed into the slot using a 3/16-inch to 1/4-inch thick wood paddle or roller designed and approved for the purpose.
10. The loop shall be wound in accordance with the standard plan details unless otherwise specified.
11. Four feet of loop conductor slack for each loop, shall be left in the loop termination pull box.
12. The loop conductor home-run for each loop shall have its start (S) and finish (F) conductors twisted together into a pair (at least 3 turns per foot) before being placed in the home-run slot, conduit, and termination pull box.
13. Each loop shall be tested at the termination pull box before the slots are filled with sealant. Each loop shall not exceed 0.5 ohms circuit resistance and not less than 200 meg-ohms insulation resistance. As measured with a 500 VDC megger.
14. All detector loop circuits shall be tested for circuit resistance, insulation resistance, and inductance at the controller cabinet with the drain wires terminated before final termination of the detector lead-in cable to detector panel terminal blocks.
15. The detector loop circuit resistance shall not exceed 0.5 ohms plus 0.35 ohms per 100 feet of lead-in cable. The detector loop circuit insulation resistance shall not be lower than 100 meg-ohms between any conductor and earth ground. The detector loop circuit inductance shall be between 250 and 450 micro-henries for type "C" loops and between 150 and 300 micro-henries for type "Q" loops.

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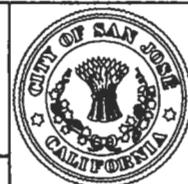
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**INDUCTIVE LOOP DETECTORS
TYPE C AND Q
NOTES**

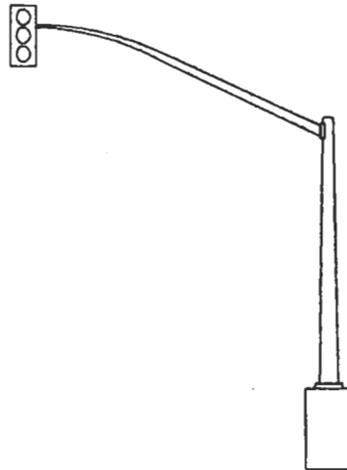
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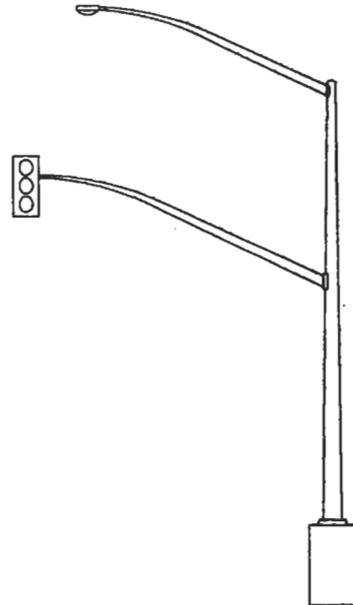
DRAWING
NO.

E-72

STANDARD TYPE
16-1-70
17A-1-70
17B-1-70
17C-1-70
17D-1-70
17E-1-70
18-1-70
19-1-70
19A-1-70
18-1-80
19-1-80
19A-1-80

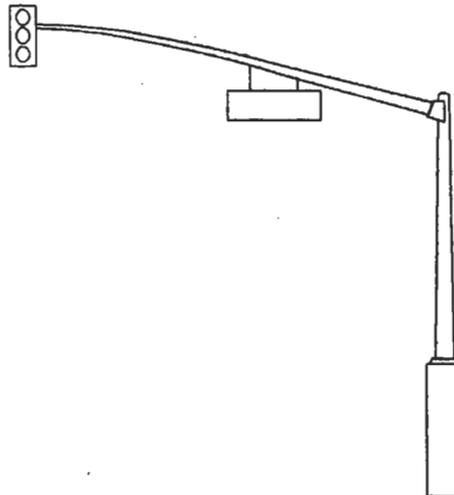


ELEVATION
TYPE 16-1-70, 18-1-70, 18-1-80

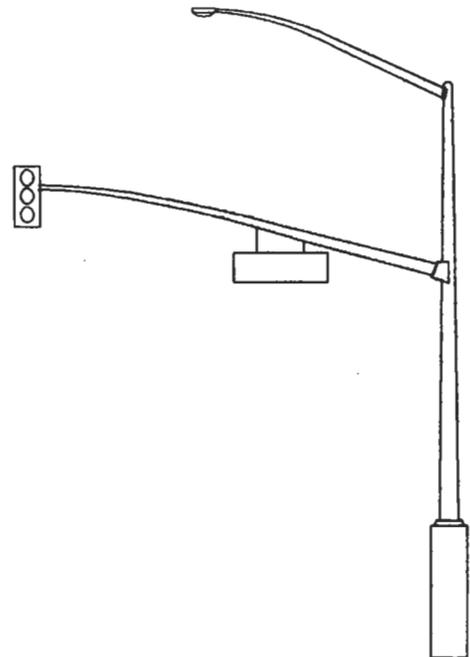


ELEVATION
TYPE 17A-1-70, 17B-1-70,
17C-1-70, 17D-1-70, 17E-1-70
19-1-70, 19A-1-70, 19-1-80, 19A-1-80

STANDARD TYPE
16-2-70
17A-2-70
17B-2-70
18-2-70
19-2-70
19A-2-70
16-2-80
17-2-80
17A-2-80
18-2-80
19-2-80
19A-2-80



ELEVATION
TYPE 16-2-70, 18-2-70, 16-2-80, 18-2-80



ELEVATION
TYPE 17B-2-70, 19-2-70,
17A-2-70, 19A-2-70, 17-2-80
17A-2-80, 19-2-80, 19A-2-80

NOTES:

- STANDARDS FOR TRAFFIC SIGNALS SHALL CONFORM TO SECTION 86 OF THE CALTRANS STANDARD SPECIFICATIONS AND CALTRANS STANDARD PLAN DETAILS (LATEST ENFORCED ISSUE).
- SEE CALTRANS STANDARD PLAN DETAILS (LATEST ENFORCED ISSUE) FOR FABRICATION AND STANDARD IDENTIFICATION DETAILS.
- LUMINAIRES SHALL BE HIGH PRESSURE SODIUM OR LOW PRESSURE SODIUM AS SPECIFIED.
- ALL SIGNAL HEAD ASSEMBLIES SHALL BE INSTALLED WITH ELEVATOR PLUMBIZER MOUNTING BRACKET UNLESS NOTED OTHERWISE.
- FOUNDATIONS FOR TRAFFIC SIGNALS SHALL CONFORM TO SECTION 86 OF THE CALTRANS SPECIFICATIONS AND CALTRANS STANDARD PLAN DETAILS (LATEST ENFORCED ISSUE).

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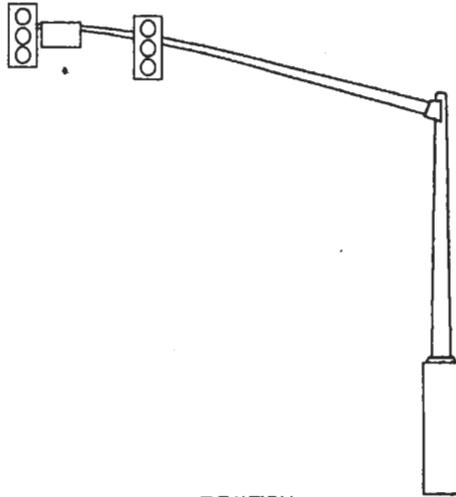
SIGNAL STANDARDS
TAPERED ROUND

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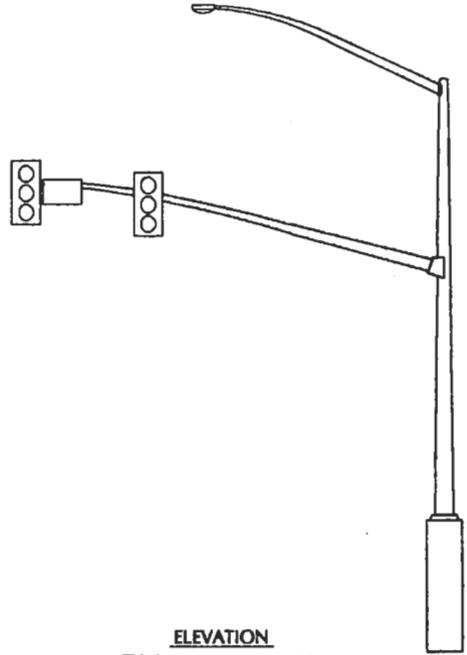
DRAWING NO.

E-73

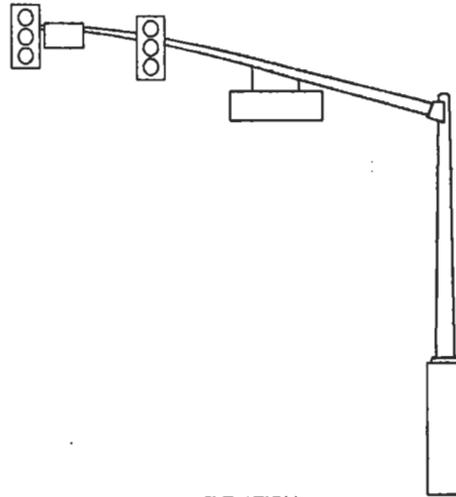


STANDARD TYPE
17-3-70
18-3-70
19-3-70
19A-3-70
23-3-70
24-3-70
24A-3-70
26-3-70
26A-3-70
27-3-70
17-3-80
18-3-80
19-3-80
19A-3-80
23-3-80
24-3-80
24A-3-80
26-3-80
26A-3-80
27-3-80

ELEVATION
 TYPE 18-3-70, 23-3-70,
 27-3-70, 18-3-80, 23-3-80, 27-3-80

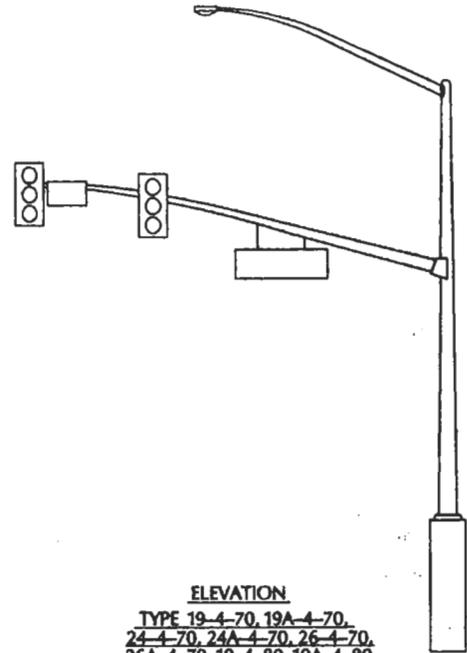


ELEVATION
 TYPE 17-3-70, 19-3-70,
 19A-3-70, 24-3-70, 24A-3-70,
 26-3-70, 26A-3-70, 17-3-80,
 19-3-80, 19A-3-80, 24-3-80,
 24A-3-80, 26-3-80, 26A-3-80



STANDARD TYPE
18-4-70
19-4-70
19A-4-70
23-4-70
24-4-70
24A-4-70
26-4-70
26A-4-70
27-4-70
18-4-80
19-4-80
19A-4-80
23-4-80
24-4-80
24A-4-80
26-4-80
26A-4-80
27-4-80

ELEVATION
 TYPE 18-4-70, 23-4-70,
 27-4-70, 18-4-80, 23-4-80, 27-4-80



ELEVATION
 TYPE 19-4-70, 19A-4-70,
 24-4-70, 24A-4-70, 26-4-70,
 26A-4-70, 19-4-80, 19A-4-80,
 24-4-80, 24A-4-80, 26-4-80, 26A-4-80

NOTES:

- STANDARDS FOR TRAFFIC SIGNALS SHALL CONFORM TO SECTION 86 OF THE CALTRANS STANDARD SPECIFICATIONS AND CALTRANS STANDARD PLAN DETAILS (LATEST ENFORCED ISSUE).
- SEE CALTRANS STANDARD PLAN DETAILS (LATEST ENFORCED ISSUE) FOR FABRICATION AND STANDARD IDENTIFICATION DETAILS.
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- ALL SIGNAL HEAD ASSEMBLIES SHALL BE INSTALLED WITH ELEVATOR PLUMBIZER MOUNTING BRACKET UNLESS NOTED OTHERWISE.
- FOUNDATIONS FOR TRAFFIC SIGNALS SHALL CONFORM TO SECTION 86 OF THE CALTRANS SPECIFICATIONS AND CALTRANS STANDARD PLAN DETAILS (LATEST ENFORCEMENT ISSUE).

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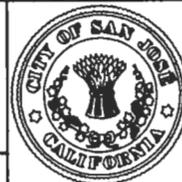
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SIGNAL STANDARDS
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DRAWING NO.

E-74

STANDARD TYPE
28-5-70
29-5-70
29A-5-70
28-5-80
29-5-80
29A-5-80

ELEVATION
TYPE 28-5-70, 28-5-80

ELEVATION
TYPE 29-5-70, 29A-5-70,
29-5-80, 29A-5-80

STANDARD TYPE
40-0-80

ELEVATION
TYPE 40-0-80

NOTES:

1. STANDARDS FOR TRAFFIC SIGNALS SHALL CONFORM TO SECTION 86 OF THE CALTRANS STANDARD SPECIFICATIONS AND CALTRANS STANDARD PLAN DETAILS (LATEST ENFORCED ISSUE).
2. SEE CALTRANS STANDARD PLAN DETAILS (LATEST ENFORCED ISSUE) FOR FABRICATION AND STANDARD IDENTIFICATION DETAILS.
3. LUMINAIRES SHALL BE HIGH PRESSURE SODIUM OR LOW PRESSURE SODIUM AS SPECIFIED.
4. ALL SIGNAL HEAD ASSEMBLIES SHALL BE INSTALLED WITH ELEVATOR PLUMBIZER MOUNTING BRACKET UNLESS NOTED OTHERWISE.
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SIGNAL STANDARDS
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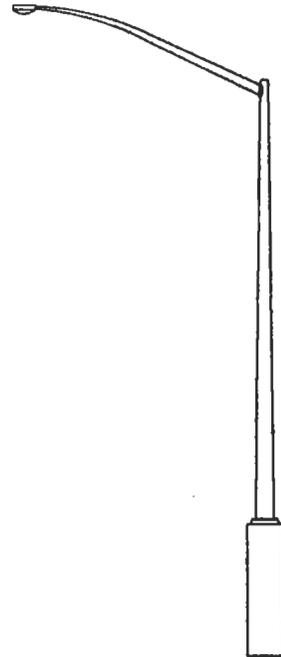
DRAWING NO.

E-75

STANDARD TYPE
1-B
15



ELEVATION
TYPE 1-B



ELEVATION
TYPE 15

NOTES:

1. STANDARDS FOR TRAFFIC SIGNALS SHALL CONFORM TO SECTION 86 OF THE CALTRANS SPECIFICATIONS AND CALTRANS STANDARD PLAN DETAILS (LATEST ENFORCED ISSUE).
2. SEE CALTRANS STANDARD PLAN DETAILS (LATEST ENFORCED ISSUE) FOR FABRICATION AND STANDARD IDENTIFICATION DETAILS.
3. LUMINAIRES SHALL BE HIGH PRESSURE SODIUM OR LOW PRESSURE SODIUM AS SPECIFIED.
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5. FOUNDATIONS FOR TRAFFIC SIGNALS SHALL CONFORM TO SECTION 86 OF THE CALTRANS SPECIFICATIONS AND CALTRANS STANDARD PLAN DETAILS (LATEST ENFORCED ISSUE).

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MISCELLANEOUS
SIGNAL STANDARDS

DEPARTMENT OF PUBLIC WORKS



DRAWING
NO.

E-76

**CITY OF SAN JOSE
STANDARD DETAILS**

1992

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